

**TOWNLINELAKE**  
**LAKE IMPROVEMENT BOARD**  
**HEARING OF PRACTICABILITY & REVIEW OF APPORTIONMENTS**  
**August 19, 2023**

A special meeting of the Townline Lake, Lake Improvement Board was held in the Tamarack District Library, 832 Lincon Ave., Lakeview, Michigan on the 19<sup>th</sup> day of August 2023, at 10:30 a.m.

The hearing of practicability was called to order by Marv at 10:32 a.m.

PRESENT: Todd Sattler, Secretary/Drain Commissioner  
Marv Kladder, Chairperson  
Nancy Snyder, Belvidere Township Representative  
Larry Higdon, Cato Township Representative  
Pat Carr, Board of Commissioner's Representative

ABSENT: All present

ALSO

PRESENT: Rick Buteyn, Progressive AE  
Anne Gaylord & Sara McGill, MCDC  
See attached for resident sign in

Chairman Kladder introduces the lake board members and Rick.

A motion was made by Larry and seconded by Todd to accept the minutes of the June 21, 2023; meeting as presented. Motion carried.

Todd provided a financial update to the Board.

A motion was made by Nancy and seconded by Larry to accept the Treasurer's Report as presented. Motion carried.

Todd explained the procedures of the Hearing of Practicability and the Review of Apportionments and the necessity of both hearings.

Todd read all residential letters received prior to the meeting. A motion was made by Nancy and seconded by Larry to add residential letters to the minutes. Please see attached.

Presentation

Rick provided a presentation to the Board and the public. He presented a budget and explained the different types of treatments. Rick provided a treatment map to the Board and the residents and explained the differences between native and invasive species. He stated that a new invasive species of Starry Stonewort has recently been found in Townline lake and advised

that this plant requires copper to treat it and cannot be harvested as fragmentation can encourage growth. He noted that Starry Stonewort limits navigation and can limit spawning areas for fish.

The chairman opened the meeting up to the public for questions and comments.

Roger Jachim – Asked for more information on harvesting and how deep it can go. Rick responded that mechanical harvesting goes down about 5-6 feet but must be in at least 2 feet of water. The lake was harvested for the first time this season. The harvesting only targets native plants. Once they are cut, they are removed and dumped on the Townline LIB parcels for disposal. They have harvested 3 days so far and still have another 2 days on the schedule. He added that they do have limitations on where they can harvest and added that it is mostly done for navigational purposes.

Sue Valente – Asked if there is a map to show where they are harvesting. Rick said that he had a treatment map included in the presentation and that he determines the areas to treat during his surveys of the lake.

Gary Tidd – Noted that many of the plants are coming in from the launch site and asked if there was anyway to monitor that. He also added that he has taken a lot of floating plants off the lake since harvesting. Rick noted that the boat launch is definitely a factor in the number of weeds in the lake and bring in the invasive species. He added that some lakes have boat wash stations, but there is no way to make people use it unless they cannot enter the lake without first passing through the boat wash station. He also added that harvesting can leave some floating sediment and they will continue to try to clear it up with the next two scheduled harvesting days.

Diana Jachim – Asked for a cost for a boat washing station. Rick responded that he doesn't know for sure, but he believes it could be around 35k for just the machine and would probably be around 200k for the whole process.

Judy Hazel – Green lawns and houses are causing more problems on the lake. People need to protect their lake. She added that she believes septic systems are a problem and she doesn't know what is in the water in terms of sewage. Todd responded that she is absolutely right and added that water quality is tested.

Brad Wernette – Asked how many acres are being harvested as \$425/acre. Rick said that 24 acres are scheduled to be harvested this season and the 55k budget includes the treatments and the harvesting.

Bryan Spyke – Asked if there are any concerns with the water quality report. Rick responded that he tests for a whole lake average and noted that levels were miniscule. If people would like to test directly on their property, they can contact the Health Department for testing materials.



Larry Streekstra – Noted that treatments are going well, and the lake is very clear. He asked if anything can be done for the lily pads. Rick added that they can be removed for navigational purposes, but they are actually very good for the lakes and the fish habitats. He also added that they can be removed manually by the homeowners. He noted that the hot summer contributed to the rapid growth.

Jeanne Jerow – Asked if the budget covers the channel dredge and what happened to all the geese. Todd responded that the channel dredge has a separate assessment. He added that geese tend to cycle, and the avian flu likely influenced the goose population.

Jack Koester – Asked if the weir catches nutrients before they go into the lake. Todd responded that the channel was dredged, and the weir was cleaned out two years ago. It was not maintained well prior to the last few years and was a bit full. The Drain Office is now keeping up the maintenance to make sure it continues to work properly. He also noted that the Drain Office is working with the Road Commission to maintain it.

Julie Wilkenson – Noted that there are a lot of weeds on her property from the harvesting and asked if she can dump them on the LIB parcels. Todd said she can absolutely dump them in the disposal lots.

Stephanie Cribbs – Asked about the possibility of a whole lake sewer system. Larry said that they tried to spread a petition about ten years ago, but they couldn't get enough signatures. Todd provided a snapshot of the Sidney Sewer project and advised that it would likely cost at least 25k per parcel for a sewer system.

Randy Richoff – Asked if manually harvesting allows more to be done. Rick answered that it depends on what is needed each season/treatment. Harvesting helps the lake be removing the weeds and not just making more sediment. Not having any weeds would cause more algae.

Roger Jachim – Asked about sonar treatments. Rick responded that the sonar worked until the milfoil hybridized and the new form does not react to the chemical anymore.

Gerald Hudson – Asked if all of the floating fish lately were caused by the harvesting. Rick said the dead fish may be floating because the harvesting is stirring up the bottom of the lake, but the harvesting does not kill fish. Harvesting causes the weeds to grow back more slowly, harvesting too early can cause increased growth.

Phil Tanis – Asked how wake boats affect the lake. Rick said that wake boats stir up the lake a lot and provided the updated recommendations on wake boats from the DNR.

There being no further questions or comments from the public, the Hearing of Practicability was closed by the Chairman.

The Resolution to Proceed with Improvements was offered for approval to the Lake Board.

**RESOLUTION TO PROCEED WITH  
IMPROVEMENTS TO TOWNLINE LAKE**

At a special meeting of the Townline Lake, Lake Improvement Board was held in the Tamarack District Library, 832 S Lincon Ave., Lakeview, Michigan, on the 19<sup>th</sup> day of August 2023, at 10:30 a.m.

PRESENT: Todd Sattler, Nancy Snyder, Pat Carr, Larry Higdon, Marv Kladder  
ABSENT: All Present

The following resolution was offered by member Sattler and seconded by member Higdon.

WHEREAS, a public hearing was held on the lake improvement program for Townline Lake; and

WHEREAS, it is the desire of the Townline Lake, Lake Improvement Board to proceed with implementation of improvements to the lake as described in the attached Exhibit A.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The Lake Board hereby determines that the proposed improvements are practical, and it confirms its intent to proceed with the improvements.
2. The Lake Board hereby approves the lake improvement plan and the estimate of costs for the improvements as shown on the attached Exhibit A.
3. This resolution shall be published in a newspaper of general circulation in Montcalm County. The petition shall not, thereafter, be subject to attack except in an action brought in a court of competent jurisdiction within 30 days after publication.

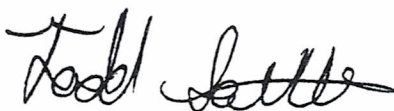
ADOPTED:           AYES:       5  
                      NAYS:       0

RESOLUTION DECLARED ADOPTED.

STATE OF MICHIGAN       }  
                                      } ss  
COUNTY OF MONTCALM }

I, Todd Sattler, Secretary/Treasurer of said Townline Lake, Lake Improvement Board, do hereby certify that this is a true and correct copy of a resolution adopted by the Lake Board at a meeting held on the 19<sup>th</sup> day of August 2023. Public notice of said meeting was given pursuant to and in compliance with Act 267, Public Acts of Michigan, 1976, as amended.

IN WITNESS WHEREOF, I have hereunto set my hand, this 19<sup>th</sup> day of August 2023.



Todd Sattler, Secretary/Treasurer  
Townline Lake, Lake Improvement Board



**TOWNLINELAKE  
CATO & BELVIDERE TOWNSHIPS  
WEED CONTROL PROGRAM  
PROPOSED BUDGET BENEFIT FACTORS  
2023 – 2027  
EXHIBIT A**

<b>IMPROVEMENT</b>	<b>Estimated Cost of Program</b>
Aquatic Plant Control	\$55,000
Lake Management Consulting Plant Control Oversight	\$8,500
Water Quality Sampling and Reporting	\$3,500
Comprehensive Aquatic Plant Survey and Reporting	\$3,500
Lake Management Consulting Administration	\$1,000
<u>Administration and Contingency</u>	<u>\$5,500</u>
Yearly Program Budget	<b>\$77,000</b>

The Special Assessment District for Townline Lake includes all properties which border the lake and back lots which have been deeded or dedicated lake access. Special assessments for the project are proposed to be apportioned in the following manner:

**USE FACTORS**

• Direct access	1.0
• Direct Commercial	20
• Channel Access	.75
• Indirect Access	.50
• Indirect Commercial	10
• Indirect Honeymoon Heights Plat	.65

Contiguous lots in common ownership will each be assessed as a separate lot based on the above factors.

The hearing for the review of apportionments was called to order by Chairman Kladder at 11:33 a.m.

#### Presentation of Special Assessment Roll

Todd presented the tax roll and explained the benefit factor used to determine the amount to assess each parcel.

Chairman Kladder opened the hearing up for questions and comments from the public.

Brad Wernette – Asked why the assessment isn't just a circumference around the lake? Todd responded that everyone included in the assessment has deeded access to the lake through their parcel.

Brad Wernette – Added that it is a public lake and asked why there is a difference between Schmeid Park and Honeymoon Heights. Todd added that the assessment is based on legal rights to the lake and the County and Townships also pay an assessment. There is currently no way to assess the DNR for the public boat launch, but there is legislation in process. He also explained the difference between Schmeid Park and Honeymoon Heights and noted that Honeymoon Heights has several private parks, any area for dock use and several deeded access points to the lake.

Roger Jachim – Stated that his property is in Honeymoon Heights and on the channel and asked if he receives two assessments for that. Todd said no, he would only be assessed for the channel.

Diana Jachim – Said she is astounded at what the Drain Office has provided and is very happy with the simplification of the process and benefit factors. She wanted to thank the Board and the Drain Office for the changes and the effort put into this.

Jeanne Jerow – Asked if the Board can assess people with no exclusive rights. Can they not levy taxes against properties that are close to the lake? Todd said that it makes it very difficult to assess as there is no definite line as to where the benefits stop and that is why this is based on legal rights to the lake.

Jeanne Jerow – Asked if Todd has the authority to levy the taxes. Todd said yes, but that will make things more difficult to maintain and keep accurate. This proposed assessment is very cut and dry.

Laura Sanford – Asked to show the division of the different factors. Todd pointed out the divisions on the map and noted that it will be easier to see on our website.

Julie Koutz – Asked about combining parcels. Todd advised that anyone contact their assessor for questions on combining parcels.

Jack Koester – Asked about limiting docks at the campground and asked who has the authority to do so. Todd noted that we cannot limit the docks, but the campground is being assessed for each dock they have in the water.

Nicky Moon – Asked what stops large parcels from continuing to split. Todd advised that the Land Division Act only allows a parcel to split so many times within ten years.

Jerry Hudson – Added that he has 2 parcels, and his opinion is that the biggest issue on the lake is perception of use. Todd said the only real solution is for the Township to re-plat the area.

Pat Carr added that every lake has individual issues and Todd and the Board are doing a great job at making the assessments fair to the majority of residents.

There being no further questions or comments from the public on the Review of Apportionments, the hearing was closed by the chairperson.

The Resolution Confirming the Special Assessment Roll was offered for approval by the Lake Board.



**RESOLUTION CONFIRMING SPECIAL ASSESSMENT ROLL  
AND DIRECTING THE COLLECTION OF SPECIAL ASSESSMENTS  
FOR IMPROVEMENTS TO TOWNLINE LAKE**

At a special meeting of the Townline Lake, Lake Improvement Board held in the Tamarack District Library, 832 S Lincoln Ave., Lakeview, Michigan, on the 19<sup>th</sup> day of August 2023, at 10:30 a.m.

PRESENT: Todd Sattler, Nancy Snyder, Pat Carr, Larry Higdon, Marv Kladder

ABSENT: All Present

The following resolution was offered by member Sattler and seconded by member Kladder.

WHEREAS, the Lake Board, after due and legal notice, has reviewed the Special Assessment Roll prepared for the purpose of assessing the cost of certain lake improvements to Townline Lake against benefitting properties; and

WHEREAS, the Lake Board has adopted the benefit factor formula as described in the attached Exhibit A.

WHEREAS, the Lake Board deems said Special Assessment Roll to be fair and equitable;

NOW, THEREFORE, BE IT RESOLVED AS FOLLOWS:

1. The Special Assessment Roll shall be designated as Townline Lake Special Assessment Roll. (2023 - 2027)
2. Said Special Assessment Roll in the amount of \$385,000.00 is hereby confirmed.
3. The assessments in said Special Assessment Roll shall be payable in 5 annual installments with the first installment of \$77,000.00 to be due on December 1, 2023, and payable without penalty through February 14, 2024. Subsequent installments of \$77,000.00 shall be due on or before the 1<sup>st</sup> day of the December of each year thereafter and are payable without penalty through the 14<sup>th</sup> day of the February of each year thereafter.
4. The assessments made in said Special Assessment Roll are hereby ordered and directed to be collected, and the Township Clerk of Cato Township and the Township Clerk of Belvidere Township shall deliver said Special Assessment Roll to the Township Treasurer, with his/her warrant attached, commanding the treasurer to collect the assessments therein in accordance with the directions of the Lake Board, and the treasurer is directed to collect the amounts assessed as the same become due.

ADOPTED: AYES: 5  
NAYS: 0

RESOLUTION DECLARED ADOPTED.

STATE OF MICHIGAN        }  
                                      } ss  
COUNTY OF MONTCALM }

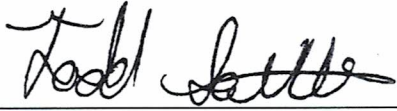
I, Todd Sattler, Secretary/Treasurer of said Townline Lake, Lake Improvement Board, do hereby certify that this is a true and correct copy of a resolution adopted by the lake board at a meeting held on the 19<sup>th</sup> day of August 2023. Public notice of said meeting was given pursuant to and in compliance with Act 267, Public Acts of Michigan 1976, as amended.

IN WITNESS WHEREOF, I have hereunto set my hand, this 19<sup>th</sup> day of August 2023.

**NOTICE OF CONFIRMATION  
OF SPECIAL ASSESSMENT ROLL  
FOR IMPROVEMENTS TO TOWNLINE LAKE**

TAKE NOTICE that the Townline Lake, Lake Improvement Board has confirmed the Special Assessment Roll for improvements to Townline Lake. The Special Assessment Roll in the amount of \$385,000.00 has been prepared for the purpose of assessing the cost of aquatic plant control, administration, and contingencies over a 5-year (2023-2027) period. Said Special Assessment Roll and all assessments thereon are final and conclusive unless attacked in a court of competent jurisdiction within 30 days of this notice.

Townline Lake, Lake Improvement Board  
Montcalm County, Michigan

A handwritten signature in black ink, appearing to read "Todd Sattler", written in a cursive style.

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Todd Sattler, Secretary/Treasurer  
Townline Lake, Lake Improvement Board

Dated: August 19, 2023



There being no further business to come before the Lake Board, a motion was made by Todd and seconded by Larry to adjourn the meeting at 12:26 p.m.



Todd Sattler, Secretary/Treasurer  
Townline Lake, Lake Improvement Board

Dated: August 19, 2023


State of Michigan }

} ss.

County of Montcalm }

I hereby certify that the foregoing is a true and complete copy of the minutes of a meeting of the Townline Lake, Lake Improvement Board, Montcalm County, Michigan held on August 19, 2023, and that said minutes are on file in the office on the Montcalm County Drain Commissioner and are available to the public.

I further certify that notice of the meeting was posted at least 18 hours before the meeting at the Office of the Montcalm County Drain Commissioner, which is the principal office of the Townline Lake, Lake Improvement Board and on the county website at [mi-montcalmcounty.civicplus.com](http://montcalmcounty.civicplus.com).



Todd Sattler  
Montcalm County Drain Commissioner

## TOWNLINe LAKE

### HEARING OF PRACTICABILITY & REVIEW OF APPORTIONMENTS

August 19, 2023

Tamarack District Library  
832 Lincoln Ave  
Lakeview, Michigan

#### ATTENDANCE RECORD

1. ALAN WILLIAMS
2. Judy Hazle
3. GARY TIDD
4. PERCY FILLIS
5. Jim & Carol McIntosh
6. Stephanie CRIBB
7. Cheryl Main
8. Rod HORRICKS
9. Brian Spylke
10. Wilma Glass
11. Kurt Adams
12. Eric Mulder
13. Anna Sanford
14. John V. [Signature]
15. Brian Young [Signature]
16. Gerald Hudson
17. John P. [Signature]
18. Sheila Sheneman
19. TINA LAMER
20. Roger & DIANA JACOBSON

TOWNLINE LAKE

HEARING OF PRACTICABILITY & REVIEW OF APPORTIONMENTS

August 19, 2023

Tamarack District Library  
832 Lincoln Ave  
Lakeview, Michigan

ATTENDANCE RECORD

1. Beau Coullan &
2. Julie Kautz
3. Ronald & Julie
4. KEN LUNDWALL
5. Ronald Commans
6. Kathleen Commans
7. Cathy Werner
8. Roger Werner
9. Gloria Merumian
10. Phillip Travis
11. Dennis & Joan Bass
12. Marc Kladder
13. GEORGE BIZOVI
14. Mike + Sue Vellanti
15. Pam Van Slyke
16. Joe Travis
17. Bill & Kathy Steele
18. Brad Wernette
19. Janet & Don Hibbard
20. Randy & Jean Van Dyck



**TOWNLINE LAKE**

**HEARING OF PRACTICABILITY & REVIEW OF APPORTIONMENTS**

**August 19, 2023**

Tamarack District Library  
832 Lincoln Ave  
Lakeview, Michigan

**ATTENDANCE RECORD**

1. Dan & Karen Blackmer
2. Chris & Vickie Moon
3. Richard Koon
4. Cindy & Bill Winter
5. Jack & Luann Koester
6. Larry STRA
7. Jeanne Jron
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19.
20.

# Townline Lake Improvement Board Public Hearings: August 19, 2023

Rick Buteyn  
progressive|ae

1

## 2024-2028 Proposed Budget

Improvement	Annual Cost
• Aquatic Plant Control	\$55,000
• Lake Management Consulting	
• Plant Control Oversight	\$8,500
• Water quality sampling and reporting	\$3,500
• AVAS Survey and Reporting	\$3,500
• Lake Management Consulting Admin	\$1,000
• Administration and Contingency	\$5,500
<b>TOTAL</b>	<b>\$77,000</b>

2



# Aquatic Plant Control

\$55,000

Herbicide Treatments and Mechanical Harvesting



3

# Aquatic Plant Control

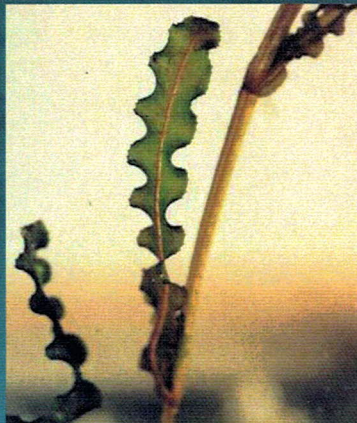
## Plants of Primary Concern

Invasive exotic species:

Eurasian (hybrid) milfoil



Curly-leaf pondweed



Starry stonewort



4

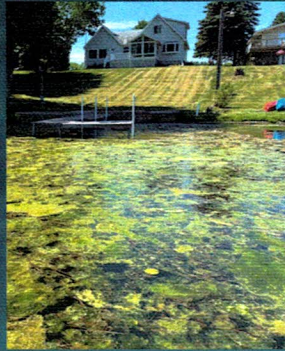


# Aquatic Plant Control

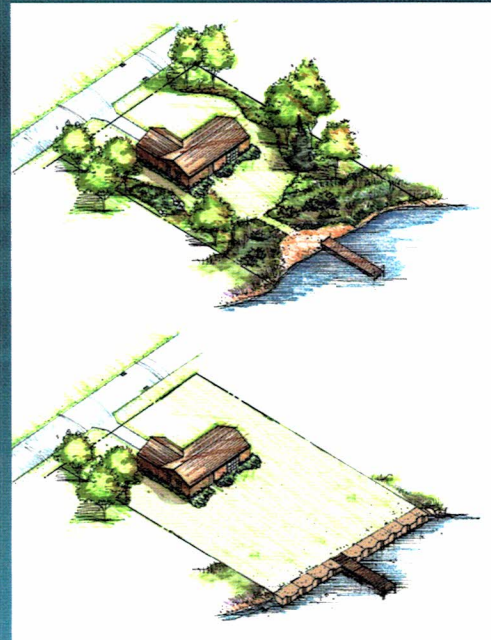
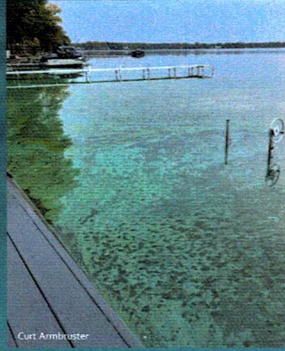
Algae concerns and what you can do:

Algae types:

Filamentous algae



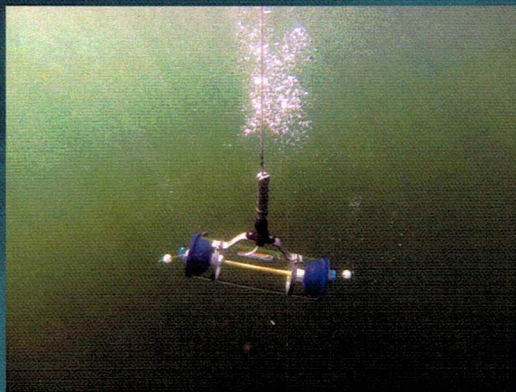
Blue-green algae



5

## Lake Management Consulting

Plant Control Oversight	\$8,500
Water Quality Sampling and Reporting	\$3,500
AVAS Survey and Reporting	\$3,500
Lake Management Consulting Admin	\$1,000



6



# Administration and Contingency

\$5,500

- Public hearings related costs (mailings, advertisements, etc....)
- Administrative costs incurred by the county
- Additional herbicide treatment or mechanical harvesting

7

# Helpful Resources



<https://montcalm.us/476/Lake-Improvement>



michiganlakeinfo  
michiganlakeinfo.com

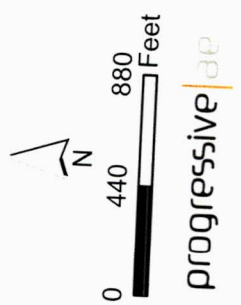
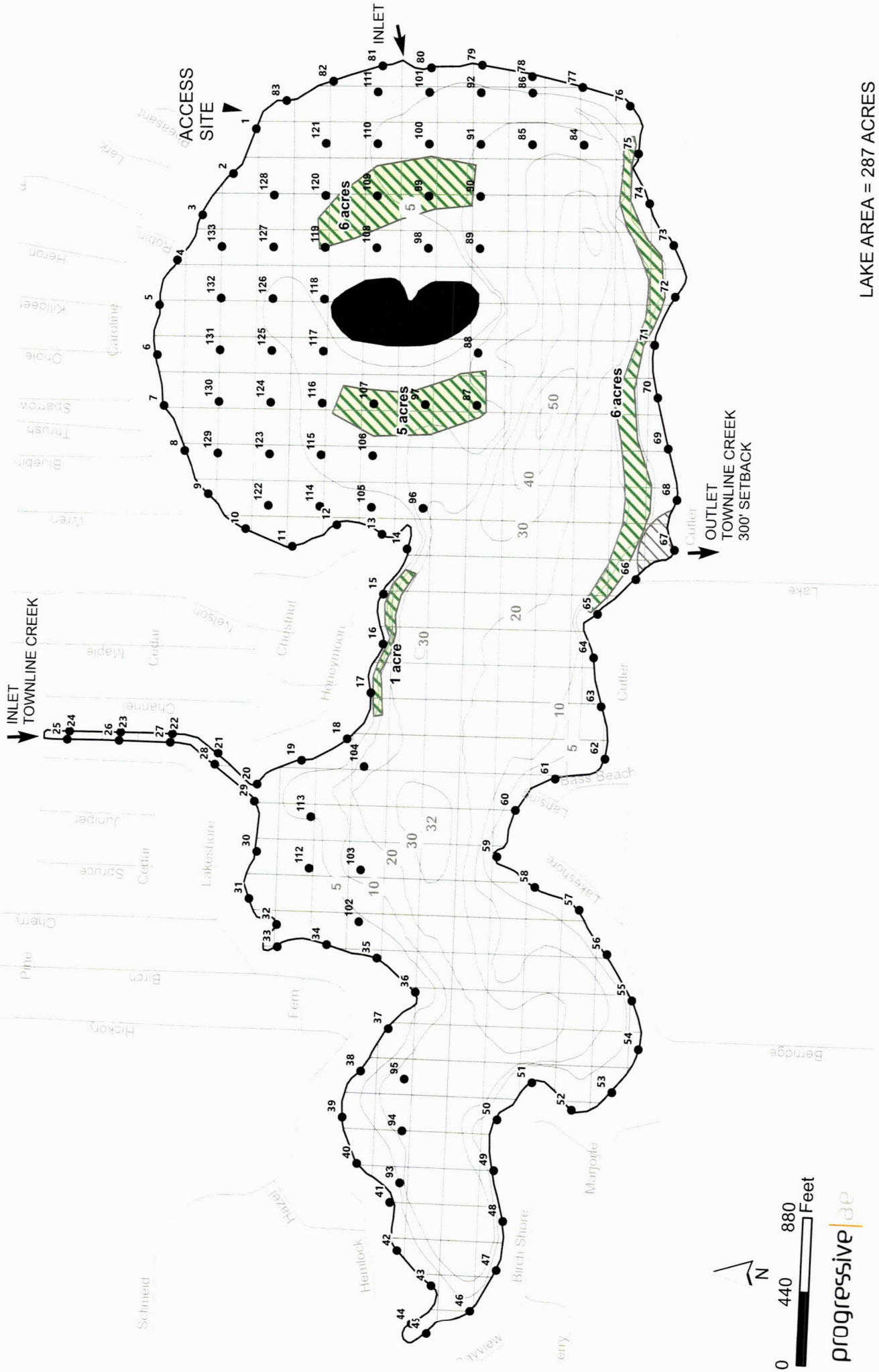
8



# TOWNLINE LAKE MONTCALM COUNTY, MICHIGAN HARVEST MAP SURVEY DATE: AUGUST 2, 2023

□ = 1 ACRE

 Harvesting of nuisance native plants = 18 acres



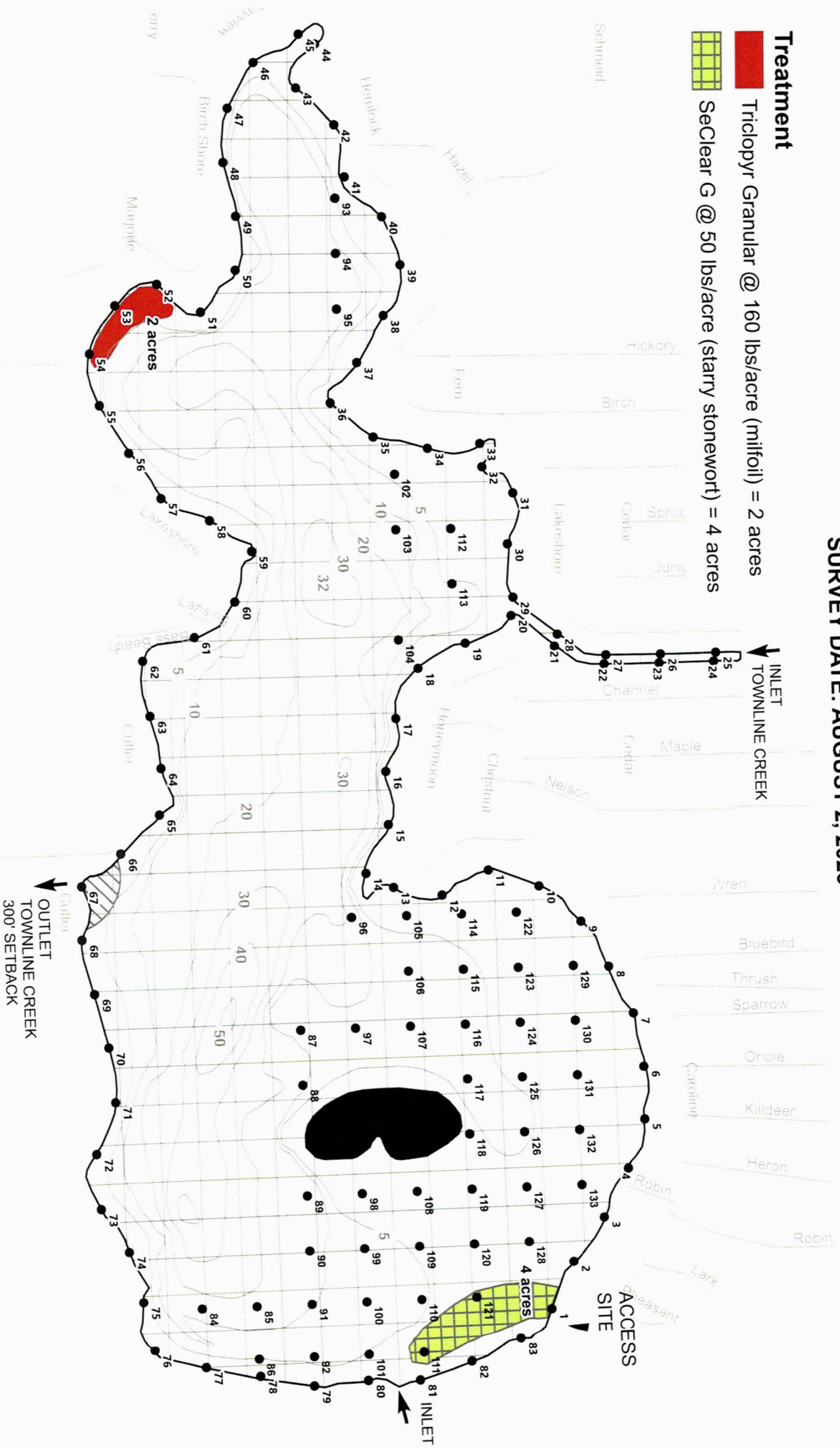
LAKE AREA = 287 ACRES  
REVISION DATE: JANUARY, 2021



**TOWNLINE LAKE**  
**MONTCALM COUNTY, MICHIGAN**  
**TREATMENT MAP**  
**SURVEY DATE: AUGUST 2, 2023**

**Treatment**

- Triclopyr Granular @ 160 lbs/acre (milfoil) = 2 acres
- SecClear G @ 50 lbs/acre (starry stonewort) = 4 acres



0 440 880  
 Feet  
 progressive




LAKE AREA = 287 ACRES  
 REVISION DATE: JANUARY, 2021

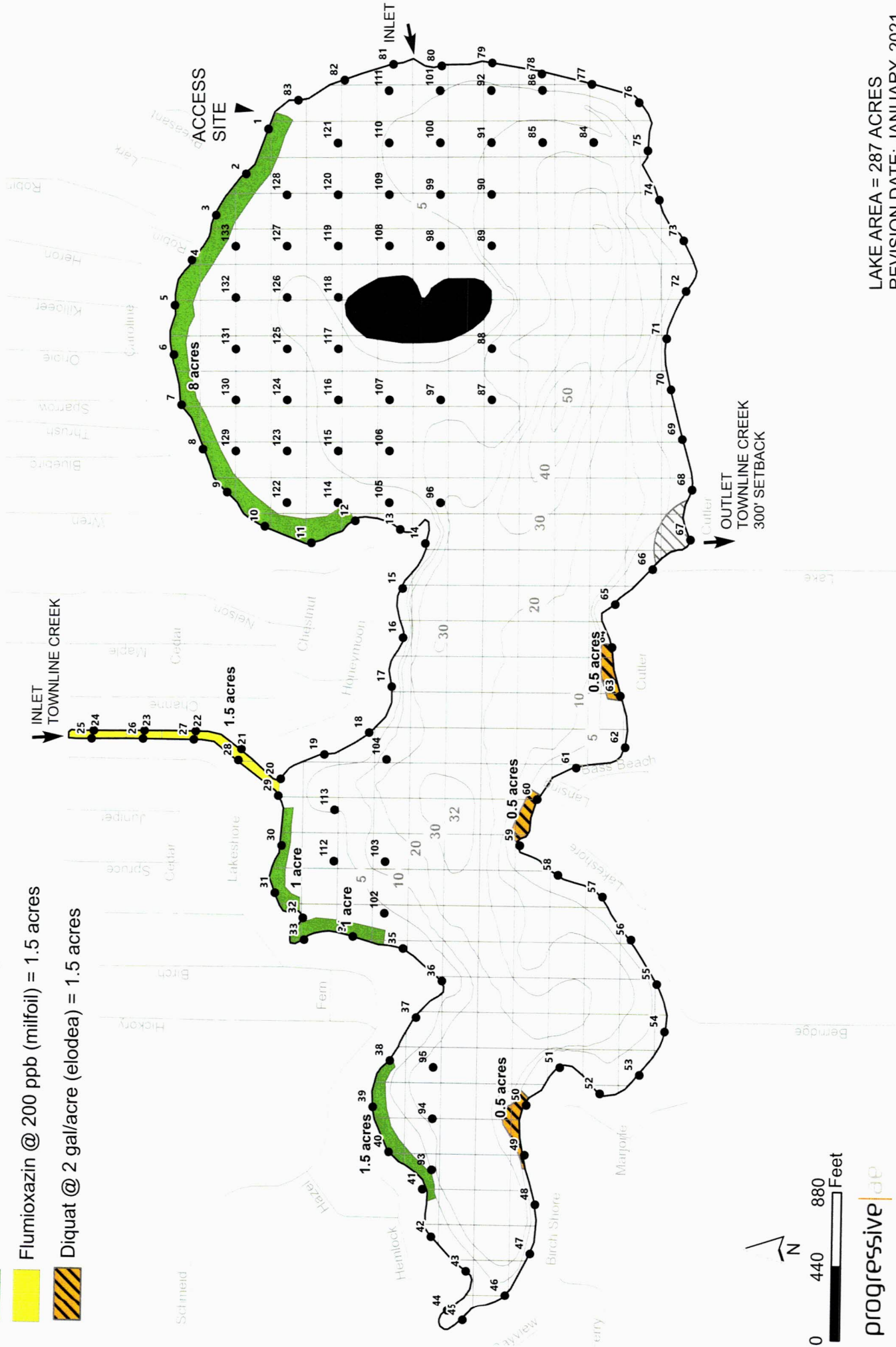
1 ACRES

□ = 1 ACRE

**TOWNLINE LAKE**  
**MONTCALM COUNTY, MICHIGAN**  
**TREATMENT MAP**  
**SURVEY DATE: JUNE 28, 2023**

**Treatment**

-  Copper at chara rates = 11.5 acres
-  Flumioxazin @ 200 ppb (milfoil) = 1.5 acres
-  Diquat @ 2 gal/acre (elodea) = 1.5 acres



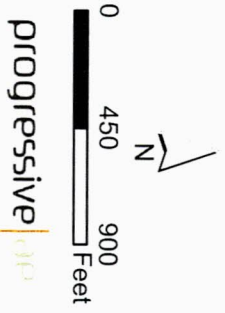
# TOWNLINE LAKE MONTCALM COUNTY, MICHIGAN TREATMENT MAP SURVEY DATE: MAY 22, 2023

## Treatment

-  Procellacor @ 4 PDU/acre + Diquat @ 1 gal/acre (mixed exotics) = 26 acres
-  Diquat @ 1 gal/acre (mixed exotics) = 59.25 acres
-  Clipper @ 200 ppb (mixed exotics) = 2.5 acres
-  Algae control = 4.5 acres



 = 1 ACRE



LAKE AREA = 287 ACRES  
REVISION DATE: JANUARY, 2021



# Organic Sediment (Muck)

*Progressive AE Water Resources Group*

Muck is a naturally occurring material found on the bottom of lakes and ponds. It is composed primarily of organic matter, giving it a distinct and often unpleasant odor and texture. High concentrations of muck are most common in productive (i.e. nutrient rich) lakes. Sources of muck can be both internal and external. Internal sources include decomposing aquatic organisms and plant biomass. Common external sources of organic material include leaf litter, lawn clippings, ashes from lakeside bonfires, and runoff from the watershed.

While muck has a grim reputation among those who recreate on Michigan's inland lakes, it plays a vital role within a lake's ecosystem. Muck provides valuable habitat to small aquatic organisms (i.e. macroinvertebrates). These macroinvertebrates include midge and mayfly larvae and are a primary food source for fish.

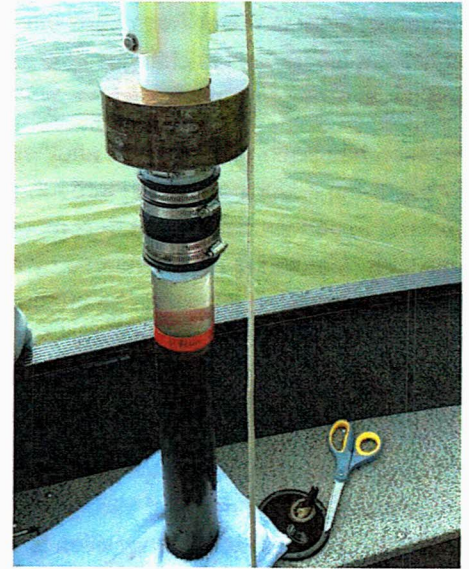
Because muck can be uncomfortable to walk in and releases an unpleasant smell when disturbed, many lakefront owners want to remove the muck in front of their home to have a more enjoyable wading and swimming experience. Physical removal, bioaugmentation (i.e. muck-digesting pellets), and aeration are strategies that have been attempted by many lake residents to rid their lake frontage of muck.

Physical removal of muck can be accomplished either manually or mechanically. Both approaches require a permit from the Michigan Department of Environment, Great Lakes, Energy (ELGE). If the area of impact is relatively small and the muck isn't very thick, homeowners may attempt to manually rake or shovel the muck out of their swim areas. While this is a physically demanding strategy, it is typically the cheapest way to remove muck.

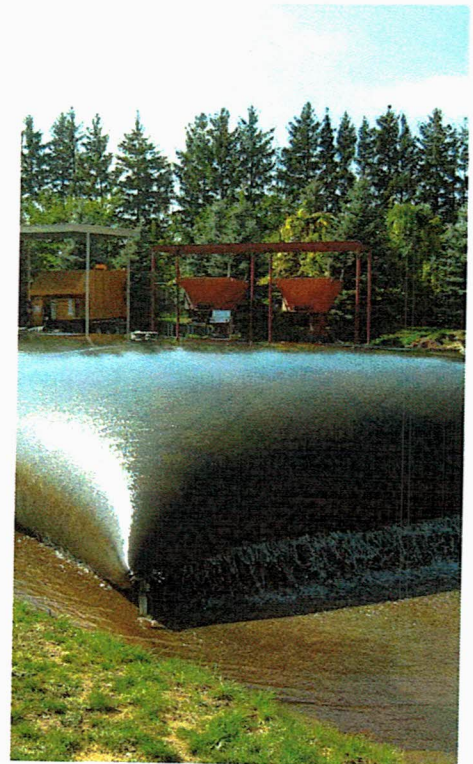
Mechanical removal of muck can be accomplished through a variety of techniques. Traditional dredging using a back hoe may be practical where a thick layer of muck has accumulated near shore or in a channel. Hydraulic dredging requires more sophisticated equipment and is typically the most expensive route to remove muck. However, it allows for sediment removal further from shore, outside the reach of a back hoe. Hydraulic dredging is the process of pumping a slurry of water and bottom sediments into a geotextile dewatering bag. Once dry, the sediments can be hauled away for disposal. Both forms of dredging require EGLE permits and technical drawings outlining the disposal site and a dewatering plan to ensure the dredging spoils do not run back into the lake or an adjacent body of water.

Electrical blowers and lake bottom rollers are two small-scale solutions to displace localized muck buildup. Blowers create water currents to move sediments while lake bottom rollers displace muck by agitating the bottom sediment. The goal of these approaches is to move nearshore muck to a deep-water location.<sup>1</sup> However, when used in heavily developed areas, both of these strategies may cause the displaced muck to settle in front of nearby properties, compounding the muck issues for their neighbors.

Bioaugmentation (i.e. muck-digesting pellets) has been applied to many lakes and ponds in an attempt to reduce organic sediments. Positive results from applying muck-digesting pellets are so far anecdotal as these products have not been validated by peer-reviewed



Core sample of nutrient rich lake sediment



Hydraulic dredging geotextile dewatering bag



scientific literature. A recent laboratory study conducted by Grand Valley State University's Annis Water Resources Institute determined that "there was no statistically significant differences in changes of organic matter between treatments with pellets and those without pellets."<sup>2</sup>

Aeration has been attempted as another mode of muck removal. The concept is that by supplying additional oxygen through aeration, the naturally occurring bacteria or bacteria added via pellets that decompose or "eat" muck will be able to do so more efficiently. Measuring muck reduced by aeration has proven difficult as it is likely that locally reduced muck can be attributed to the aerators agitating the sediments, moving them away from the aerated areas. It is of note that aeration may also have unintended negative consequences. Because the aerators can resuspend nutrient rich sediments, it is possible that increased algal growth will be observed.

Although most riparians would prefer a sandy lake bottom in front of their home, this is not possible around many of Michigan's inland lakes. Prior to purchasing a lake home, evaluating the sediment composition is an important step in selecting a property that will suit your recreational needs.



Aerator on a lake bottom



Weed roller clearing a swim area

1 Hoyer, M. V., Canfield, D. E., Brenner, M. (2017, January). A Beginner's Guide to Water Management - Muck: Causes and Corrective Actions. Florida LAKEWATCH.

2 Steinman, A. D., Partridge, C. G., Hassett, M., Oudsema, M., Kindervater, E. (2021, April). Assessment of the Effectiveness of Muck-Digesting Bacterial Pellets.

For more information regarding Michigan's inland lakes, please visit:  
[michiganlakeinfo.com](http://michiganlakeinfo.com)





# Phosphorus

## The Nutrient Driving Lake Productivity

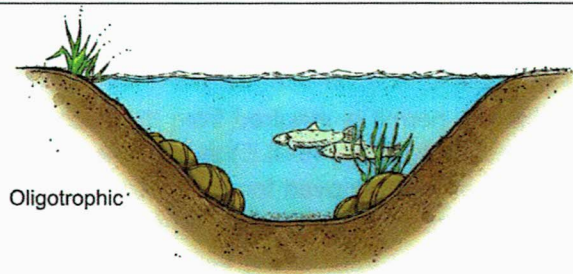
Lakes can be classified into three broad categories based on their productivity or ability to support plant and animal life. The three basic lake classifications are "oligotrophic," "mesotrophic," and "eutrophic". Oligotrophic lakes are generally deep and clear with little aquatic plant growth. These lakes maintain sufficient dissolved oxygen in the cool, deep bottom waters during late summer to support cold water fish such as trout and whitefish. By contrast, eutrophic lakes are generally shallow, turbid, and support abundant aquatic plant growth. In deep eutrophic lakes, the cool bottom waters usually contain little or no dissolved oxygen. Therefore, these lakes can only support warm water fish such as bass and pike. Lakes that fall between these two extremes are called mesotrophic lakes.

A lake's natural progression from oligotrophic to eutrophic is accelerated by increased phosphorus loading (or input). The quantity of phosphorus present in the water column is important because phosphorus is the nutrient that most often controls aquatic plant growth and the rate at which a lake ages and becomes more eutrophic. In the presence of oxygen, phosphorus is retained within the lake sediments, making it unavailable for aquatic plant growth. However, if bottom-water oxygen is depleted, phosphorus will be released from the sediments. In some lakes, the internal release of phosphorus from the bottom sediments is the primary source of phosphorus loading.

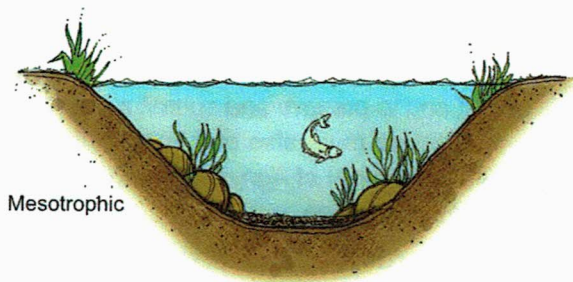
By reducing the amount of phosphorus in a lake, it may be possible to lessen the amount of aquatic plants and nuisance algae growth. In general, lakes with a phosphorus concentration greater than 20 µg/L (micrograms per liter, or parts per billion) are able to support abundant plant growth and are classified as nutrient-enriched or eutrophic.

There are ways to reduce phosphorus in a lake in order to slow the lake aging process. Aluminum sulfate (i.e. alum) is a chemical that has been used successfully in many lakes to lower phosphorus levels by preventing phosphorus release from lake sediments. Once applied, alum binds with phosphorus in the water column and settles to the bottom as fine particles. This layer of particles inhibits the release of phosphorus from lake sediments. Alum is commonly used to treat wastewater and drinking water and, over the last half-century, there have been hundreds of lake alum treatments. Alum treatments require special application equipment and can be quite costly.

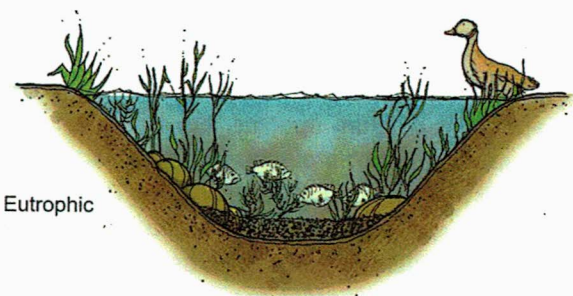
Lanthanum is another chemical being used to bind phosphorus in Michigan's inland lakes. Because they are relatively new, the effective duration (length of time that binding and bottom release of phosphorus is inhibited) is generally unknown for lanthanum treatments. The mode of operation is similar to alum in that it strips phosphorus throughout the water column and settles to the bottom, preventing phosphorus release. Although comparable in cost, application of currently available lanthanum-based products are more easily applied to lake waters than alum.



Oligotrophic



Mesotrophic



Eutrophic

For more information regarding Michigan's inland lakes, please visit [michiganlakeinfo.com](http://michiganlakeinfo.com)



**michiganlakeinfo**  
michiganlakeinfo.com



# Aquatic Herbicides

Prevention is the first defense in exotic species control. However, once an exotic plant has colonized a lake, a rapid response should be taken to control its spread. One such response is the use of aquatic herbicides.

In Michigan, a permit is required from the Michigan Department of Environment, Great Lakes, and Energy (EGLE) to apply herbicides to lakes. The permit lists the herbicides that are approved for use, respective dose rates, use restrictions, and indicates specific areas of the lake where treatments are allowed. EGLE aquatic herbicide permitting information can be found at <https://www.michigan.gov/egle/about/organization/water-resources/aquatic-nuisance-control>.

Prior to being applied to Michigan's inland lakes, herbicides must be registered and approved by the Environmental Protection Agency (EPA). There are currently over 300 herbicides registered with the EPA. Of those, only about a dozen are approved for use in the aquatic environment. In addition to Michigan's permitting system, there are federal regulations that require herbicide applicators to acquire a pesticide general permit and to prepare and submit a pesticide discharge management plan. Herbicide applicators must also obtain a pesticide applicator certification through the Michigan Department of Agriculture and Rural Development (MDARD) prior to applying aquatic herbicides.

There are two basic types of herbicides: systemics and contacts. Systemic herbicides are taken up by the plant and translocate to the root system which helps to provide season-long control. With systemic herbicides, it may take several weeks for the impacts to the treated plants to become apparent. Contact herbicides only affect the portion of the plant that comes into contact with the herbicide. Plants usually die back within a week of treatment, but some plants like Eurasian milfoil may grow back later in the season since the roots remain intact and viable.

Unlike systemic herbicides that are selective, contact herbicides can impact a broad spectrum of plant species, but timing and rate of application can be used to minimize non-target impacts. Deciding which herbicide to use in a particular situation will depend on the plant(s) being targeted, potential impacts to non-target species, cost, use restrictions, and other factors. In general, herbicide treatments should target nuisance exotic species such as Eurasian milfoil and have minimal impacts on most native plant species.

If applied properly, herbicides have no direct impacts on fish. In general, lakes with a variety and moderate density of plants often support healthy fisheries. Targeting invasive exotic plants with herbicides aids in the preservation of valuable, native plants that provide habitat and cover for fish.

The best approach or combination of approaches to control aquatic plants in a particular lake depends on local conditions and the expectations of lake residents. Once an exotic plant has been introduced in a lake, a complete eradication is unlikely and a sustained effort is often required to ensure control. Ask your lake management consultant about the best way to manage the aquatic plants in your lake.



Eurasian milfoil



Herbicide application

For more information regarding Michigan's inland lakes, please visit [michiganlakeinfo.com](http://michiganlakeinfo.com)







## Shorelands Management

### What lakefront property owners should know and do

By Progressive AE

Proper shoreland management is vital to protect both water quality and fisheries. During pre-settlement days, much of the shoreland around lakes was forested, wetlands, or grassland. Natural habitat was abundant. Over time, as shorelands were developed, much changed. Shoreland vegetation was removed, and natural areas that allowed rain waters to infiltrate were replaced by rooftops, roads, driveways, and other hard surfaces. Now, rather than infiltrating, storm water runs off these hard surfaces, often carrying fertilizer, oil, and other pollutants to the lake. Problems associated with excessive shoreland development include increased aquatic plant growth, diminished fisheries, and poor water quality. How we manage our shorelands can have a direct and profound impact on the quality of our lakes.

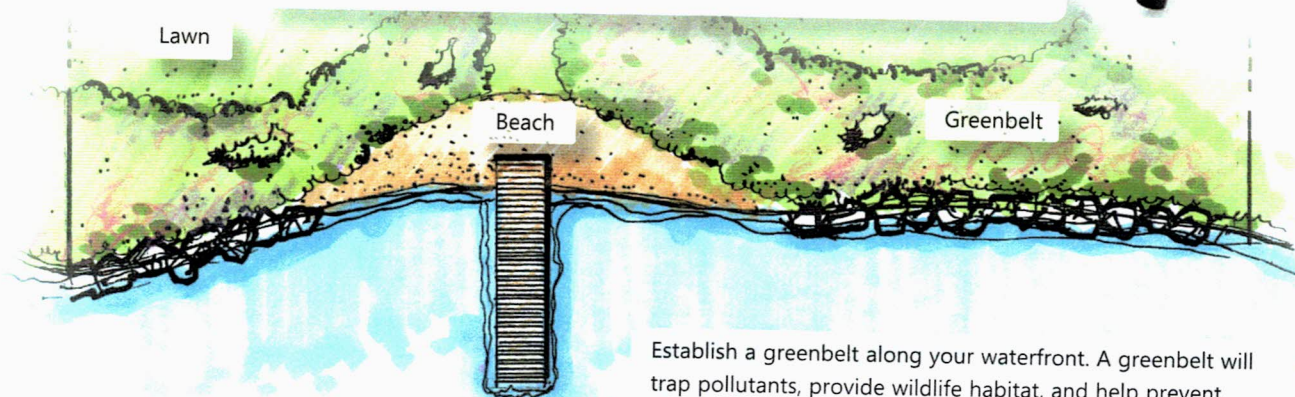
Protecting shorelands is straightforward: Maintain or restore as much natural shoreland as possible. That is not to say that you can't—or shouldn't—have an area to swim, moor boats, fish or lounge by the shore. However, manicured lawn to the water's edge and boundless seawalls are not conducive to healthy lakes, nor is large-scale removal of aquatic vegetation.

In addition to protecting or restoring natural shoreland, you should also be careful about the application of lawn fertilizers, especially fertilizers containing phosphorus. Phosphorus is the nutrient that most often stimulates excessive growth of aquatic plants and causes premature lake aging. Fertilizers should only be used sparingly near lakes, if at all. If you must use fertilizer, only use a phosphorus-free fertilizer. Once in the lake, a pound of phosphorus can generate hundreds of pounds of aquatic vegetation. This vegetation is most evident in the near-shore areas of the lake where we swim and recreate.

Take a look at the following illustrations. Then take a look at your shoreland and see what you can do to help preserve the natural features of your lake.



Minimize lawn area. Less turf means less fertilizer, less pesticides—and less mowing! It's better for the lake and easier on you.



Establish a greenbelt along your waterfront. A greenbelt will trap pollutants, provide wildlife habitat, and help prevent shoreline erosion.



## Caring for Your Shoreland

***Your shoreland can be maintained to provide beach and boat access for you while maintaining habitat for fish and wildlife.***

Don't dump into storm drains; pollutants may be piped directly to the lake.

Most lakeside soils have more than enough phosphorus to grow lawns, trees, and shrubs. Adding phosphorus fertilizer is usually not necessary, and can cause excessive growth of aquatic plants.

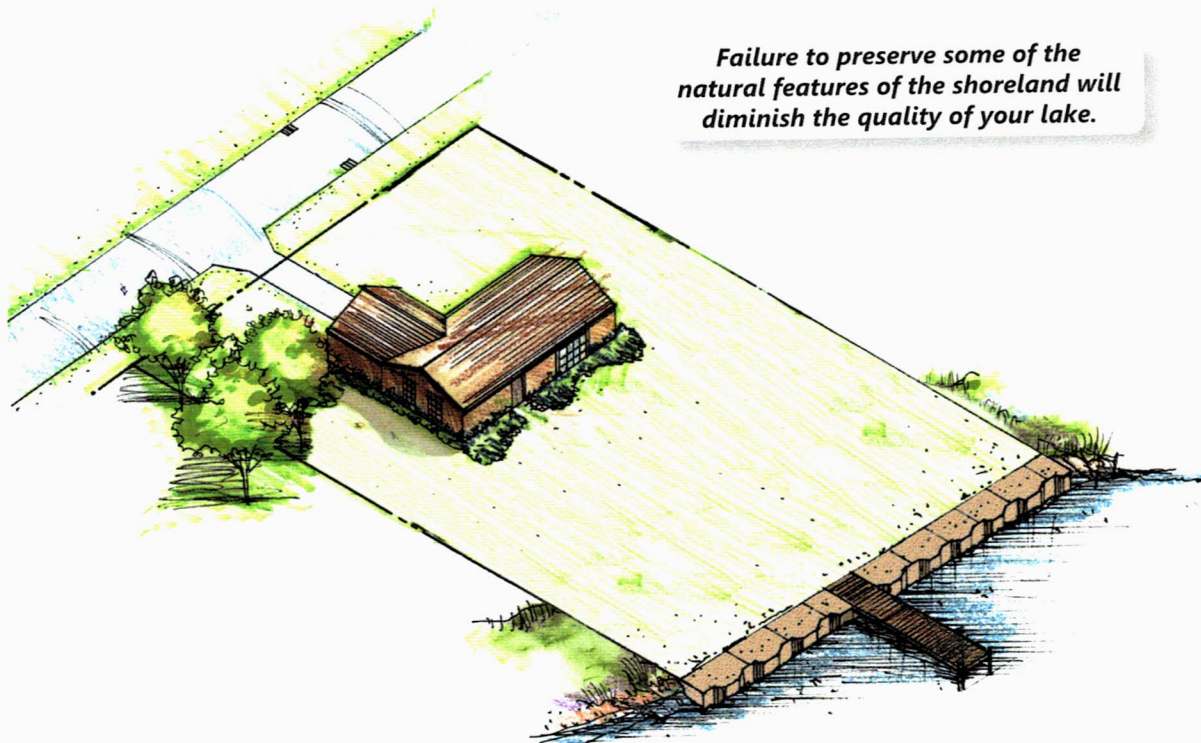
Maintain a greenbelt of trees, shrubs, and ground cover—it's habitat for fish and wildlife, and helps protect water quality too.

Build a raingarden to infiltrate rain water and reduce runoff into the lake. Visit [www.raingardens.org](http://www.raingardens.org).

Minimize lawn area to reduce the need for fertilizer.

Establish a greenbelt to filter runoff and discourage nuisance geese.

You can maintain a small beach and dock area—it's "habitat" for you!





**Aquatic plants are part of a healthy lake. They produce oxygen, provide food and habitat for fish, and help to stabilize shoreline and bottom sediments.**

Insects and other invertebrates live on or near aquatic plants, and become food for fish, birds, amphibians and other wildlife.

Plants and algae are the base of the food chain. Lakes with a healthy fishery have a moderate density of aquatic plants.

Aquatic plants provide habitat for fish and other aquatic life.

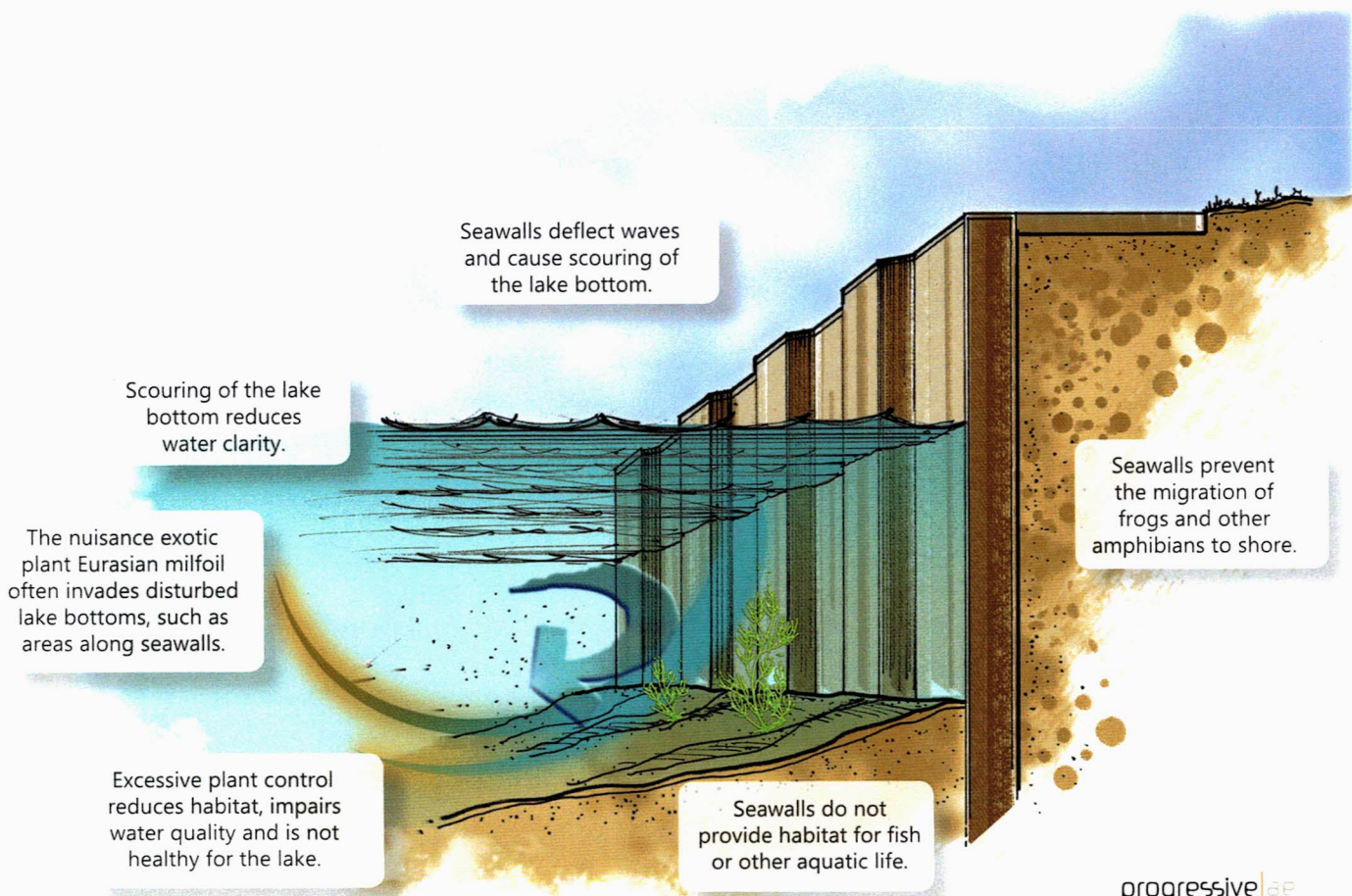
Aquatic plants help to hold sediments in place and improve water clarity.

Roots and stones absorb wave energy and reduce scouring of the lake bottom.

Trees and shrubs prevent erosion and provide habitat.

Predator-fish such as pike hide among plants, rocks, and tree roots to sneak up on their prey. Prey-fish such as minnows and small sunfish use aquatic plants to hide from predators.

progressive|ae

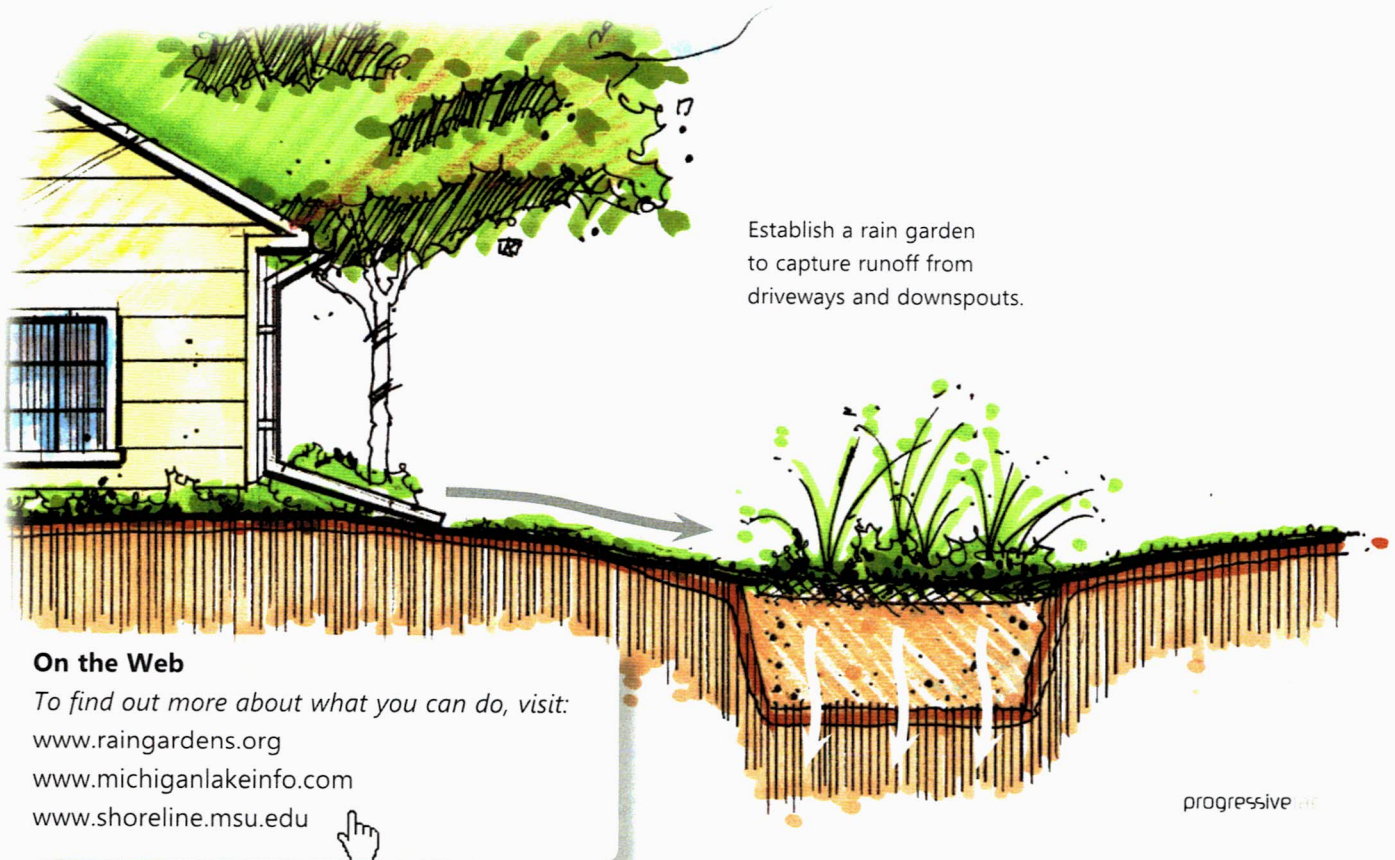


progressive|ae



# 10 Ways To Protect Your Lake

1. Don't use lawn fertilizer that contains phosphorus. If you use a professional lawn care service, insist upon a fertilizer that does not contain phosphorus.
2. Use the minimum amount of fertilizer recommended on the label — more is not necessarily better!
3. Water the lawn sparingly to avoid washing nutrients and sediments into the lake.
4. Don't feed ducks and geese near the lake. Waterfowl droppings are high in nutrients and may cause swimmer's itch.
5. Don't burn leaves and grass clippings near the shoreline. Nutrients concentrate in the ash and can easily wash into the lake.
6. Don't mow to the water's edge. Instead, allow a strip of natural vegetation (i.e., a greenbelt) to become established along your waterfront. A greenbelt will trap pollutants and discourage nuisance geese from frequenting your property.
7. Where possible, promote infiltration of stormwater into the ground. Build a rain garden to capture runoff from driveways and downspouts.
8. Don't dump anything in area wetlands. Wetlands are natural purifiers.
9. If you have a septic system, have your septic tank pumped every 2 to 3 years.
10. Don't be complacent — your collective actions will make or break the lake!





## Anne Gaylord

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**From:** Todd Sattler  
**Sent:** Monday, August 21, 2023 8:48 AM  
**To:** Anne Gaylord  
**Subject:** FW: Townline Lake's weed control program

Todd Sattler  
Montcalm County Drain Commissioner  
211 W. Main Street, P.O. Box 368  
Stanton, MI 48888  
989-831-7322 (office)  
616-788-3218 (cell)

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**From:** Forquer, Dave <dforquer@alro.com>  
**Sent:** Friday, August 18, 2023 10:13 AM  
**To:** Todd Sattler <TSattler@montcalm.us>  
**Subject:** Townline Lake's weed control program

Mr. Sattler  
This is Dave Forquer, my residence is 6666 Birchshore Dr. Lakeview.

I am unable to attend the meeting on August 19, 2023, but do have some thoughts. Hopefully, you receive this email.

I do not mind paying for weed control, and if we have an increase in that fee, I am ok with that also. I do not know what we currently pay and would like to know that what each treatment costs?

The people on the lake are already paying high taxes, but that is our choice to live in a nice area. My concern is that many people use the lake and likely are not contributing anything towards the cost of maintaining the lake. We have many people that use the public landing along with those at the campground are likely not contributing. I would guess we have at least 20 boats or pontoons parked at the campground. Those two things together likely create 15-20% of the lake activity. I have no idea on how you would assess a fee and even harder how would you police it.

Thanks Dave Forquer

August 16, 2023

Montcalm County Drain Commissioner

211 S. Main

Stanton, MI 48888

RE: Protest of special assessment and Protest of continuation of special assessment

Dear Mr. Sattler:

Per your letter dated July 11, 2023, postmarked August 9, 2023, I am writing this letter of protest to both the special assessment and the continuation of the special assessment in regards to Townline Lake.

Townline Lake Lake Improvement Board met on June 21, 2023 and the Board discussed the factors, a) Lakefront: 1 on change from the special assessment roll 2018-2022, Indirect, Schmeid: .5 unsure if previously this was .5 or .95 – regardless – staying the same with no change or decrease, Channel Access: .75 decrease from .85, and Indirect, HH: .65 increase from .60.

I have two back lots and no lakefront property in Honeymoon Heights Association. I cant see where I should be charged an increased and an additional special assessment when other subdivisions are not being charged at all or at a lower amounts. I have very limited access to the lake and feel that the properties and public that benefit from the use of the lake the most should incur these fees.

I have limited access to boat docs as only a few slips to allocate to a number of property owners plus I would be concerned about property damage or things stolen out of boats at these docks as they have been an issue in the past. Also, privately owned parks that are for lot owner use are limited with parking and accessibility challenges.

Owning lots on the lake as opposed to back lots are big things to consider when exercising the power to tax.

I oppose the the special assessment and the continuation of the special assessment stated in your letter from July 11<sup>th</sup>, which I did not receive until August 14, 2023. I want to be heard since I cant be at the August 19<sup>th</sup> meeting due to timing of the letter received.

Warmest Regards,

A handwritten signature in black ink, appearing to read 'Fawn Wright', written in a cursive style.

Fawn Wright



Monday, August 14, 2023

Townline Lake, Lake Improvement Board  
Montcalm County Drain Commissioner  
211 S. Main  
Stanton, MI 48888

RE: Vacant Land located at  
6399 Townline Lake  
Lakeview, MI 48850

To Whom It May Concern:

I am not able to attend the Public Hearing scheduled for Saturday, August 19<sup>th</sup>. I am submitting this letter as instructed in your Public Hearing Notice to protest the increase in my assessment from **\$58.10 to \$109.24** (as explained to me by Sarah in your office).

This is vacant, sloped land. The property's water frontage is all bulrush so the lake is not accessible because you cannot walk through the bulrush. The only lake accessibility is from the dock (12 feet). The property is also located in a mucky inlet. The lake access is only used for docking a boat (which is difficult because of all the lily pads).

I am not sure what the purpose of the weed control treatment is, but I receive no benefit from it. This property has more lily pads and muck than any other property on the lake.

Thank you for your consideration of this protest.

Sincerely,

A handwritten signature in black ink that reads "Jean Hall". The signature is written in a cursive, flowing style.

Jean Hall  
5401 Wild Oak Drive  
East Lansing, MI 48823

517-881-6324

## Anne Gaylord

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**From:** Todd Sattler  
**Sent:** Wednesday, August 16, 2023 7:56 AM  
**To:** Anne Gaylord  
**Cc:** Sara McGill  
**Subject:** FW: Weed Control

Todd Sattler  
Montcalm County Drain Commissioner  
211 W. Main Street, P.O. Box 368  
Stanton, MI 48888  
989-831-7322 (office)  
616-788-3218 (cell)

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**From:** Midge Pippel <epippel@yahoo.com>  
**Sent:** Tuesday, August 15, 2023 4:11 PM  
**To:** Todd Sattler <TSattler@montcalm.us>  
**Cc:** SaraMcGill@montcalm.us  
**Subject:** Weed Control

To:  
Townline Lake Improvement Board special Assessment Committee  
From: Midge and Larry Pippel  
Townline Lake property owners.

Re: Assessment

Because I am not able to attend your upcoming meeting I called and spoke with Sarah McGill yesterday. She was so kind as to explain to me what the issues were regarding this special assessment.

I believe that weed control is essential to the enjoyment of the lake and all water recreational activities. Last year the weeds were so bad it was difficult to use our lake. I am pleased to report that this year after spraying our lake it is now usable once again. It's a pleasure to be able to back a boat away from your dock, without being tangled in weeds that impede us from going anywhere. It was a disgrace last year that many of us had to walk our boats out into deep enough water to get beyond the weeds! Fortunately, that is not the case this summer. And I wish to thank those who are involved in making the decision to treat the weeds so our lake is usable once again. Thank you!!

I recently visited Torch Lake up by Traverse City and as I drove around the lake, I noted numerous signs posted, saying: NO FERTILIZER. KEEP OUR WATER BLUE!

I can't help but wonder if some effort like that was used around Townline Lake if it might help with our weed control.

Needless to say, my husband and I support your efforts and support the increased assessment. Thank you all for your services to the county..

Sincerely,



Midge Pippel  
[Epippel@yahoo.com](mailto:Epippel@yahoo.com)

MmSent from my phone 😊

# Sheila Sheneman

11482 Hickory Drive, Lakeview MI 48850

August 14, 2023

Montcalm County Drain Commissioner  
211 S. Main  
Stanton MI 48888

RE: Protest of special assessment  
Protest of continuation of special assessment

Dear Mr. Sattler:

Per your letter dated July 11, postmarked August 9, I am writing to inform you of my protest of both the special assessment and the continuation of the special assessment in regards to Townline Lake.

Per the Townline Lake Lake Improvement Board meeting of June 21, 2023, the Board discussed the factors:

Lakefront:	1	<b>no change</b> from the Special Assessment Roll 2018-2022
Indirect, Schmeid:	.5	unsure if previously this was .5 or .95. Either will be <b>no change or decrease.</b>
Channel Access:	.75	<b>decrease</b> from .85
Indirect, HH:	.65	<b>INCREASE</b> from .60

I am protesting on the grounds that the back lot owners of Honeymoon Heights are unfairly being singled out for an increase, while all others are either remaining the same amount, or are receiving a decrease.

I also deem it inequitable that back-lot owners are being charged different amounts, based on the sub-division they live in (Schmeid vs. Honeymoon Heights.) If this is due to "public park", there IS a public park in Honeymoon Heights. Nuisance of said park is greater than that of the public Schmeid park, as Schmeid closes at dusk. Ford Lincoln, being rented, allows for overnight occupation, and the noise from the park continues through out the night.

There are also some in the "Birch Shore Subdivision" that are not being charged at all, but are perhaps rolled into the "Birch Shore Subdivision Lot Owners" grouping 004-300-000-00 (as listed in the Special Assessment Roll 2018-2022) .

The back lot owners of Bass Beach subdivision are also receiving the Schmeid indirect factor of .5, less than that of the Honeymoon Heights subdivision. There are many lake front owners who are not being charged at all (see 004-340-lots 101-110), There well may be more I am not aware of, and did not have time to fully research due to the lateness of the mailing of your notice.

As a resident of the Honeymoon Heights area, I would stipulate that the back lot owners have very limited access to the **public** lake, outside of the DNR owned



boat ramp and the county owned parks.

1. The "private owned parks" that are for the exclusive use of lot owners are mostly difficult to access due to terrain challenges and limited parking.
2. The boat docks for lot owners in Honeymoon Heights are highly limited in number, making it impossible for most back lot owners to have a place to tie up boats.
3. Boats that are able to secure a spot on the available docks are subject to damage from fireworks, theft, and vandalism. Boats have been untied and set adrift in the past. Kayaks, canoes, etc. are routinely stolen. Gas cans and other items left on boats have been stolen. It is therefore undesirable to have a boat at the "private owned parks docks".
4. Lakefront owners routinely threaten, bully, intimidate, block access to the lake, and harass anyone who attempts to go anywhere near the lake, near their property. Thus further restricting access to the lake by back lot owners.

I therefore state that merely living in "proximity" to Townline Lake provides little to no benefit to those who do not own property directly on the lake. As it is in fact a public lake, accessible to non-residents as well, I propose that this special assessment be dropped immediately. Continued costs for lake improvement should be paid for solely by those who receive actual benefit of said lake – the lakefront owners, and the public who utilizes it.

In closing, I would like to emphasize that your notice about this meeting in regards to this matter, although dated July 11, was postmarked August 9. I received it August 12. The public meeting is being held August 19, giving me less than 7 days to consider and research the matter. I thought you should be made aware of this fact.

Sincerely,



Sheila Sheneman

Copy: file

August 17, 2023

Townline Lake, Lake Improvement Board  
c/o Montcalm County Drain Commissioner  
211 S. Main Street  
Stanton, MI 4888

RE: Objection to Special Assessment

Lake Board members,

I received the notice of public hearing for a special assessment for nuisance aquatic plan control for Townline Lake. Per the letter, it indicates cost of improvement will be assessed to property benefited therefrom.

My objection is with having these costs assessed to my property (5549 Cutler Rd, parcel #001-170-063-00) which is located across the road from the lake. I have no deeded access to the lake. My only access is through the public boat launch located 2.5 miles away. Therefore, I would object to being assessed any costs for lake improvement as there is no benefit to me or my property.

Thank you for your time and consideration.



Tammy J. Warner  
5549 Cutler Rd  
Lakeview, MI 48850  
616-894-0230



**Townline Lake Finance 2019 - 2023 (84015)**

Tuesday, August 15, 2023

Date	Vendor	Description	Check	Expenses	Revenue	Balance
10/1/2018		Beginning Balance				\$ 97,340.50
10/4/2018	Michigan Lakefront Solutions	Invoice #214 Algae & Weed Treatments 8/8	140794	\$ 4,925.41		\$ 92,415.09
10/18/2018	Progressive AE	Invoice #169762 3rd Quarter Lake Consultants	141163	\$ 3,125.00		\$ 89,290.09
02/01/19	MARVIN KLADDER	Reimbursement for MSU Class	143454	\$ 195.00		\$ 89,095.09
02/28/19	Progressive AE	4th Quarter Lake Consultant	144142	\$ 4,000.00		\$ 85,095.09
04/04/19	Michigan Lakefront Solutions	2019 DEQ Permit Fee	144777	\$ 1,500.00		\$ 83,595.09
04/18/19	Progressive AE	2nd Quarter Lake Consultant	145070	\$ 4,000.00		\$ 79,595.09
5/31/2019	County Treasurer	2018 Tax Collection			\$ 61,000.00	\$ 140,595.09
7/3/2019	Michigan Lakefront Solutions	Invoice #278 Weed Treatment	146794	\$ 40,708.63		\$ 99,886.46
7/11/2019	Progressive AE	3rd Quarter Consultant Fee	146843	\$ 4,000.00		\$ 95,886.46
8/15/2019	Michigan Lakefront Solutions	Weed Treatment with Flumioxazin	147627	\$ 9,433.51		\$ 86,452.95
9/5/2019	Bass Beach Campground	Reimburse overpayment of SA	147929	\$ 910.81		\$ 85,542.14
9/5/2019	Carl Pitchford	Reimburse overpayment of SA	147933	\$ 23.86		\$ 85,518.28
9/5/2019	Chris Moon	Reimburse overpayment of SA	147934	\$ 64.58		\$ 85,453.70
9/5/2019	Edward or Ragina Napeirala	Reimburse overpayment of SA	147943	\$ 27.14		\$ 85,426.56
9/5/2019	Edwin Winter Trust	Reimburse overpayment of SA	147944	\$ 108.60		\$ 85,317.96
9/5/2019	Gary or Ardis Tidd	Reimburse overpayment of SA	147948	\$ 54.30		\$ 85,263.66
9/5/2019	Gloria Smith	Reimburse overpayment of SA	147950	\$ 67.05		\$ 85,196.61
9/5/2019	Hill Family Trust	Reimburse overpayment of SA	147955	\$ 52.65		\$ 85,143.96
9/5/2019	Jacob Cortez	Reimburse overpayment of SA	147958	\$ 23.86		\$ 85,120.10
9/5/2019	Jacqueline Huston	Reimburse overpayment of SA	147959	\$ 229.14		\$ 84,890.96
9/5/2019	John or Laura Sanford	Reimburse overpayment of SA	147960	\$ 51.01		\$ 84,839.95
9/5/2019	Murray or Arlene Meekhof	Reimburse overpayment of SA	147968	\$ 135.75		\$ 84,704.20
9/5/2019	Patricia Biergans	Reimburse overpayment of SA	147971	\$ 254.23		\$ 84,449.97
9/5/2019	Rex or Kathleen Crumbaugh	Reimburse overpayment of SA	147975	\$ 217.20		\$ 84,232.77
9/5/2019	Richard or Judith Rowland	Reimburse overpayment of SA	147976	\$ 196.64		\$ 84,036.13
9/5/2019	Richard or Patsy Loveless	Reimburse overpayment of SA	147977	\$ 27.65		\$ 84,008.48
9/5/2015	Robert Burcham	Reimburse overpayment of SA	147978	\$ 81.45		\$ 83,927.03
9/5/2019	Steven or Kimberly Gulick	Reimburse overpayment of SA	147981	\$ 25.50		\$ 83,901.53
9/5/2019	Thomas and Lois Vandyke	Reimburse overpayment of SA	147983	\$ 190.05		\$ 83,711.48
9/5/2019	Yvonne Delo	Reimburse overpayment of SA	147992	\$ 23.86		\$ 83,687.62
10/3/2019	Michigan Lakefront Solutions	Invoice #336 Algae & Milfoil treatment	148708	\$ 1,837.30		\$ 81,850.32
10/3/2019	Montcalm County Treasurer	Invoice #294 2018 Taxes	148712	\$ 656.59		\$ 81,193.73
10/10/2019	Progressive AE	4th Quarter Lake Consultant	148811	\$ 4,000.00		\$ 77,193.73
1/6/2020	Progressive AE	1st Quarter Lake Consulting Fee	151213	\$ 4,000.00		\$ 73,193.73
4/8/2020	Michigan Lakefront Solutions	Permit Fee for Townline Lake	152709	\$ 1,500.00		\$ 71,693.73
3/30/2020	Progressive AE	2nd Quarter Lake Consultant	152714	\$ 4,000.00		\$ 67,693.73
5/15/2020	Montcalm County Treasurer	2018 & 2019 Taxes Billback	153192	\$ 72.90		\$ 67,620.83
7/16/2020	Progressive AE	3rd Quarter Consultant Fee	154062	\$ 4,000.00		\$ 63,620.83
5/28/2020	PLM Lake & Land Management	Weed Treatment Townline Lake	154163	\$ 9,161.70		\$ 54,459.13
5/31/2020	Montcalm County Treasurer	2019 Tax collection			\$ 61,000.00	\$ 115,459.13
7/23/2020	Michigan Lakefront Solutions	Algae & Nuisance Plant Treatment	155486	\$ 3,009.35		\$ 112,449.78
8/13/2020	Michigan Lakefront Solutions	Weed Treatment Townline Lake	154586	\$ 20,650.28		\$ 91,799.50
9/17/2020	Michigan Lakefront Solutions	Weed Treatment Townline Lake	155144	\$ 3,075.58		\$ 88,723.92
8/28/2020	Progressive AE	4th Quarter Lake Consultant	155659	\$ 4,000.00		\$ 84,723.92
9/11/2020	Spicer Group	Accounts Support	156014	\$ 50.00		\$ 84,673.92
9/30/2020	Montcalm County	Indirect Cost Allocations		\$ 348.35		\$ 84,325.57
11/30/2020	Montcalm County	2020 Drain Assessment Montcalm County			\$ 697.17	\$ 85,022.74
1/19/2021	Progressive AE	1st Quarter Lake Consulting Fee	157254	\$ 4,000.00		\$ 81,022.74
2/2/2021	Cato Township	2020 Drain Assessment Cato Township			\$ 1,045.85	\$ 82,068.59
3/31/2021	Belvidere Township	2020 Drain Assessment Belvidere Township			\$ 1,045.85	\$ 83,114.44
3/31/2021	TCF Bank	Interest Revenue			\$ 213.55	\$ 83,327.99
4/6/2021	Michigan Lakefront Solutions	2021 EGLE Permit Fee	158601	\$ 1,500.00		\$ 81,827.99
4/6/2021	Progressive AE	2nd Quarter Lake Consultant	158616	\$ 4,000.00		\$ 77,827.99
4/30/2021	Montcalm County	2020 Delinquent Settlement			\$ 8,793.08	\$ 86,621.07
5/1/2021	Montcalm County	2020 Collected Settlement			\$ 49,418.05	\$ 136,039.12
6/24/2021	Michigan Lakefront Solutions	05/25/2021 Weed Treatment	160003	\$ 29,634.60		\$ 106,404.52
7/6/2021	Progressive AE	3rd Quarter Consultant Fee	160330	\$ 4,000.00		\$ 102,404.52
8/12/2021	Michigan Lakefront Solutions	06/22/2021 Weed Treatment	161043	\$ 1,443.01		\$ 100,961.51
9/2/2021	Montcalm County Treasurer	2019 Tax Billbacks	161396	\$ 36.45		\$ 100,925.06
9/16/2021	Michigan Lakefront Solutions	07/28/2021 Weed Treatment	161667	\$ 12,471.24		\$ 88,453.82
10/7/2021	Progressive AE	4th Quarter Lake Consultant	162065	\$ 4,000.00		\$ 84,453.82
11/16/2021	Belvidere Township	2021 Drain Assessment			\$ 1,045.85	\$ 85,499.67
11/30/2021	Montcalm County	2021 Drain Assessment			\$ 697.17	\$ 86,196.84

12/6/2021	Cato Township	2021 Drain Assessment			\$	1,045.85	\$	87,242.69
1/20/2022	Progressive AE	1st Quarter Lake Consulting Fee	163988	\$	4,000.00			\$ 83,242.69
4/7/2022	Progressive AE	2nd Quarter Lake Consultant	165494	\$	4,000.00			\$ 79,242.69
5/19/2022	Michigan Lakefront Solutions	2022 EGLE Permit Fee	166391	\$	1,500.00			\$ 77,742.69
5/23/2022	Montcalm County	2021 Delinquent Settlement				\$	8,891.69	\$ 86,634.38
5/23/2022	Montcalm County	2021 Collected Settlement				\$	49,319.44	\$ 135,953.82
7/7/2022	Michigan Lakefront Solutions	06/01/2022 Weed & Algae Treatment	167394	\$	53,957.70			\$ 81,996.12
7/7/2022	Spicer Group	Accounts Support	167408	\$	32.80			\$ 81,963.32
7/7/2022	Spicer Group	Accounts Support	167408	\$	83.50			\$ 81,879.82
7/14/2022	Progressive AE	3rd Quarter Consultant Fee	167583	\$	4,000.00			\$ 77,879.82
8/4/2022	Spicer Group	Accounts Support	167945	\$	125.25			\$ 77,754.57
8/11/2022	Michigan Lakefront Solutions	07/07/2022 Weed & Algae Treatment	168137	\$	1,420.08			\$ 76,334.49
10/20/2022	Progressive AE	4th Quarter Lake Consultant	169529	\$	4,000.00			\$ 72,334.49
11/15/2022	Belvidere Township	2022 Drain Assessment				\$	1,045.85	\$ 73,380.34
1/5/2023	Montcalm County	2019 Taxes Billback	171088	\$	145.78			\$ 73,234.56
1/5/2023	Montcalm County	2020 Taxes Billback	171088	\$	109.33			\$ 73,125.23
1/5/2023	Montcalm County	2021 Taxes Billback	171088	\$	146.06			\$ 72,979.17
1/19/2023	Progressive AE	1st Quarter Lake Consulting Fee	171352	\$	4,000.00			\$ 68,979.17
1/26/2023	Michigan Lakefront Solutions	2023 EGLE Permit Fee	171550	\$	1,600.00			\$ 67,379.17
1/31/2023	Huntington Bank	Interest Revenue				\$	151.65	\$ 67,530.82
2/27/2023	Montcalm County	2022 County At Large	14537			\$	697.17	\$ 68,227.99
2/28/2023	Huntington Bank	Interest Revenue				\$	257.29	\$ 68,485.28
3/14/2023	Cato Township	2022 Township At Large	59399			\$	1,045.85	\$ 69,531.13
3/31/2023	Huntington Bank	Interest Revenue				\$	222.47	\$ 69,753.60
4/20/2023	Progressive AE	2nd Quarter Lake Consultant	173256	\$	4,000.00			\$ 65,753.60
5/2/2023	Montcalm County	2022 Delinquent Settlement - Cato				\$	5,034.22	\$ 70,787.82
5/2/2023	Montcalm County	2022 Delinquent Settlement - Belvidere				\$	4,456.69	\$ 75,244.51
5/8/2023	Montcalm County	2022 Collected Settlement - Cato				\$	29,980.71	\$ 105,225.22
5/8/2023	Montcalm County	2022 Collected Settlement - Belvidere				\$	16,635.55	\$ 121,860.77
5/31/2023	Huntington Bank	Interest Revenue				\$	357.64	\$ 122,218.41
6/30/2023	Huntington Bank	Interest Revenue				\$	396.40	\$ 122,614.81
7/3/2023	Michigan Lakefront Solutions	06/01/2023 Weed & Algae Treatment	174927	\$	29,040.49			\$ 93,574.32
7/17/2023	Progressive AE	3rd Quarter Consultant Fee	175147	\$	4,000.00			\$ 89,574.32
7/27/2023	Montcalm County Drain Commission	Resident Notifications for Public Hearing	175416	\$	59.20			\$ 89,515.12
7/31/2023	Huntington Bank	Interest Revenue				\$	295.19	\$ 89,810.31
8/3/2023	Spicer Group	Research and Mapping	175488	\$	1,160.00			\$ 88,650.31
8/10/2023	Michigan Lakefront Solutions	07/12/2023 Weed & Algae Treatment	175511	\$	2,684.70			\$ 85,965.61
8/10/2023	View Newspaper Group	Notice Publication Cost	175525	\$	384.50			\$ 85,581.11
8/10/2023	United States Postal Service	Postage	175523	\$	372.96			\$ 85,208.15
		Remaining Balance						\$ 85,208.15