



Clearwater Lake invasive species management 2025

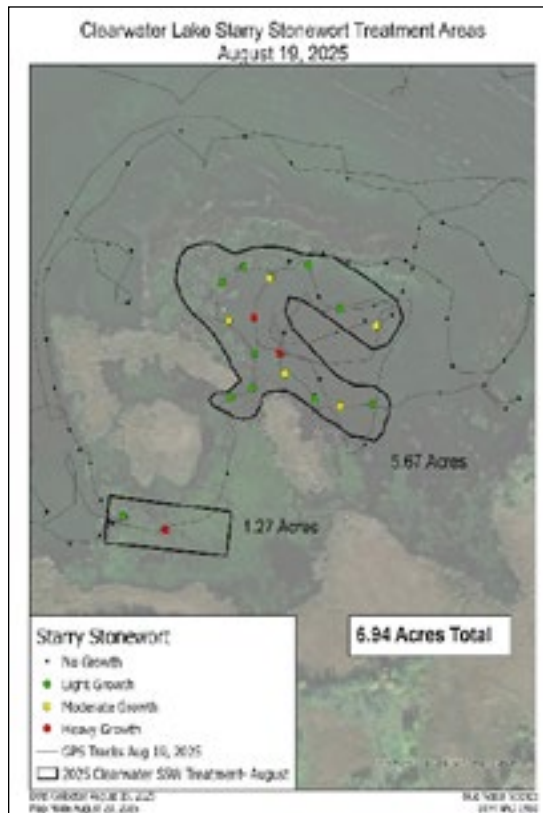
By Roy Martin, CLPO Volunteer AIS Manager

The 2025 growing season has challenged us in our battle against Aquatic Invasive Species (AIS) in Clearwater Lake. Despite aggressive actions, Starry stonewort (SSW) has persisted and expanded modestly. It increased from 4.4 acres last year to 6.94 acres this season. Native aquatic vegetation had a significant increase as well with weather that supported abundant plant growth. Chara (a helpful algae) and Vallisneria were identified by our contracted experts at Blue Water Science as particularly plentiful. Happily, Curly-leaf pondweed growth was roughly similar to 2024.

We have closely monitored the AIS growth through a series of expert investigations including an early meandering delineation survey, multiple dive delineation surveys, rake toss monitoring at all access points, access point dive delineations and a complete and extensive point intercept survey. With that understanding, we treated three problem areas of Curly-leaf pondweed and 4 complete treatments of SSW.

Starry stonewort was first confirmed in Minnesota in August 2015, in Lake Koronis and connected Mud Lake both near to us. At that time over 200 acres of SSW were discovered. It was first identified in Clearwater Lake in August of 2023 during a routine point intercept survey. Thanks to the vigilant watch of Blue Water Science, it was caught early. Dr. Paul Pattee, our CLPO AIS Manager at the time led a prompt response with the help of Lake Restoration Inc. and contained it within a relatively small area of the lake (1.8 acres).

Eradication of SSW in Clearwater Lake is currently unlikely. In fact, a Press Release from the Minnesota DNR this August states that "SSW has never been eradicated from any U.S. lake



or river, but treatment or careful removal from waterbodies can help reduce the risk of spread and relieve associated nuisance impacts". Our current strategy to manage SSW consists of prevention, early identification, prompt treatment with algacides and containment through vigilant monitoring.

2025 Status and Activities

We started the growing season knowing that a 4.4-acre area of SSW had been identified in 2024 and aggressively treated with 3 cycles of Mizzen (a copper algacide). Soon after ice-out CLPO Board member Wendy Nelson and her husband set out warning buoys surrounding the known SSW area.

AIS – See page 7

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Lake Levels

Start	End	Gain / Loss
Elevation above sea level		
APRIL		
991.14'	991.12'	-.24"
MAY		
991.12'	991.32'	2.4"
JUNE		
991.30'	992.52'	14.4"
JULY		
992.58'	992.17'	-4.08"
AUGUST		
992.16'	991.82'	-3.72"
SEPTEMBER		
991.78'	991.32'	-6"
OCTOBER (Oct. 20)		
991.30'	989.62'	-3.12"

***No wake restrictions in place when water is above 992.10'**

Ice in/Ice Out

IN	December 11, 2024
OUT	March 28, 2025

Are you a member yet?

Fill out the form on the back cover or visit www.CLPO.org for more information!

President's notes

by John Hoppe, *President-Clearwater Lake Property Owners Association*

Welcome to our new format for the Clearwater Lake Property Owners newsletter! After a hiatus where we needed to regroup with a new crew to assemble our communication we are back on schedule. You will notice that our format is quite different from what we previously published and that is because Paul Pattee who did all the work on previous newsletters has stepped down as of last June. He did an amazing job and we will need to work hard to recreate our newsletter. Our new team has lots of good ideas and I'm sure that we will be able to create an interesting publication that keeps you all informed about what's going on around the lake!

It is now well into the fall season and winter will soon be upon us. As usual the boats and shoreline equipment have been stored away. Some of us are getting ready for the ice fishing season, while others are headed to warmer climates for the winter. The long term weather forecasts imply that we may have a cold winter which will be good for making ice, and equal chances for precipitation which will make getting around easier. Any way you look at it let's all get ready to enjoy our next season on the

lake.

Going into 2026 the CLPO is facing some challenges and opportunities. We still need a couple of folks willing to donate some of their time to serve on our board of directors, and we have lots of opportunity for volunteer positions as well. The new newsletter format has space for user submitted photos of the lake and lake life so please contact us if you would like to submit something.

We hope you've all had a chance to check out our newly updated website. Just a reminder that with the new website, how we pay our dues online has changed. Beginning of 2026, the system will email you an invoice with a link you can use to pay via credit card or check. This is not mandatory request for payment, it is a voluntary request for participation to renew or join the CLPO.

In closing, the board of directors will continue to expand work towards managing the Starry Stonewort, to having an informative annual meeting, and to creating a fun time at our August picnic. I look forward to making positive changes in the coming year. I would like to ask that you all enjoy a holiday season full of family and friends, and I wish you all a wonderful winter season.

2026 Individual property owner lake shore weed spraying changes

by John Hoppe

As we move into the fall I wanted to share some changes that are in progress for individual lake shore weed spraying. As most of you know we have had two companies that provide this service, Lake Restoration, Inc. and Tigris Aquatic Services. Both companies have done good work in the past but there are changes coming for Tigris.

As a customer of Tigris I was informed on September 5, 2025 that Tigris has changed their business model and will be moving away from servicing individual lake properties and more toward a model of managing "whole lake projects". As a result, their commitment to how they will manage and service existing accounts is not clearly defined for the future.

As a result of this change the former Tigris application team, based in the St. Cloud area, has split off and formed a new company to close the gap left by Tigris. Matt Swanson and Bryce McGowan have formed Aqua Terra Solutions and will be reaching out to shore owners and current/former Tigris customers to offer a local solution. It is worth noting that the folks at Tigris

have recommended them as a quality service provider due to their experience record. They will have a business ad in this newsletter and if you are a current Tigris customer please consider contacting them to see how to move your spraying contract over to their company.

Please note that if you have not had spraying done in the past you will need to make arrangements with one of these providers before late February to ensure that a DNR permit can be put in place before spraying starts about June first. Also note that these treatments do not prevent Curly Leaf Pondweed and the chemicals used have little effect on Vallisneria ("water celery" or "eel grass").

Going forward into 2026 we will have option to contract with two companies to manage weed control on our lake shores. Please do your homework and look into both Lake Restoration and Aqua Terra Solutions. If you are one of the properties who have the "auto-renewing" contract with Tigris please contact me at contact@clpo.org for information on how to move forward.

Clearwater Lake Property Owners Board

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Contact@clpo.org
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**CALLING
ALL RESIDENTS!**

Share your photos and stories with us
and the community in the newsletter!
E-mail them to: Edits@clpo.org

Wake boats are evil! Wake boats are fun!

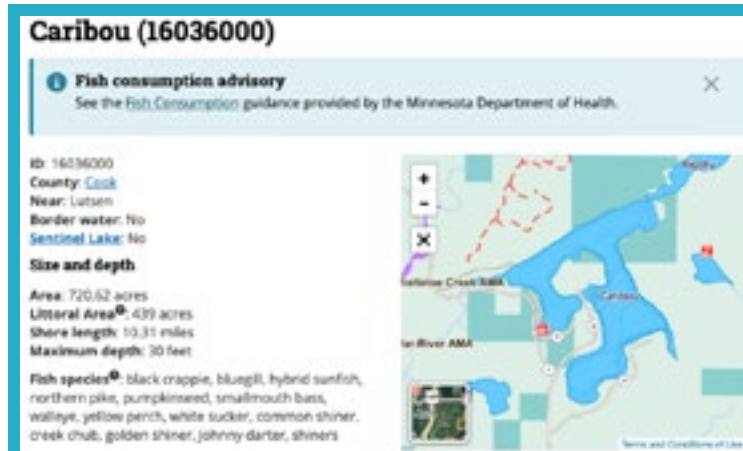
by Jim Kutzner

Wake surfing can be tons of fun! I've never surfed, and I can barely water ski, but I get it. Wake surfing is fun, which means there's a constituency of support, and they're not going away.

Wake surfing is becoming a popular sport but calling them 'wake boats' is a bit of a misnomer. Wake surfing is done at about 11 miles an hour, not enough for the boat to get up on plane, but instead the boat is plowing through the water to create wakes large enough to surf behind. Many boats built for surfing have large ballast tanks to weigh down the craft and create the huge waves. It's the large wakes that are the problem.

When wake boats appeared on the scene in a number of situations local people started expressing concerns over wake actions tearing up the lakeshore and lakebeds. Initial concerns included large and powerful waves hitting shores and docks, and then the anecdotal evidence started pouring in followed by documentation. Shoreline erosion was found to be much more impactful than waves from typical ski boats on plane. Wakes were considered a serious nuisance by many, but were considered largely a non-issue by supporters, and an impasse arose: wake surfers versus non-wake surfers. The drumbeats on each side rose, and here we are.

Rather than continue with opinions and suspect facts, real data was needed. Taking the challenge, the University of Minnesota's Saint Anthony Falls Laboratory (SAFL) investigated the result of wake boating versus ski boating on lakeshores and lake bottoms.



Caribou Lake Ordinance

Attachment A WATER SURFACE USE ORDINANCE STATE OF MINNESOTA COUNTY OF COOK ORDINANCE NO. 64 AN ORDINANCE REGULATING THE SURFACE USE OF CARIBOU LAKE.

Section 1: PURPOSE, INTENT AND APPLICATION: As authorized by Minnesota Statutes

868.201, 863.205, and 459.20, AND Minnesota Rules 61103000- 61103800 as now in effect and as hereafter amended, this Ordinance is enacted for the purpose and with the intent to control and regulate the use of the waters of Caribou Lake, located in Lutsen Township, Cook County, Minnesota, said body of water being located entirely within the boundaries of Cook County, to promote its fullest use and enjoyment by the public in general and the citizens of Cook County in particular, to insure safety for persons and property in connection with the use of said waters; to harmonize and integrate the varying uses of said waters; and to promote the general health, safety and welfare of the citizens of Cook County, Minnesota.

Section 2: DEFINITIONS: Terms used in this ordinance related to boating are defined in MS. §863.005.

Section 3: WAKE SURFING: Wake surfing, defined as the untethered use of a surfboard behind a watercraft, is prohibited on Caribou Lake in any area that meets one or more of the following criteria:

- (a) Any area that is less than 500 feet from the shoreline or another watercraft.
- (b) Any area in which the water depth is less than 20 feet.

Their Phase 1 report published in 2022 focused on lateral wave energy hitting the shore from both wake boats and ski boats. They found that the wave energy from a typical wake boat at over 500 feet from shore was the same as a ski boat

on plane 200 feet from shore. Their Phase 2 report published this year focused on downward energy and the impact on the water column and lake bottom, and videos supported the evidence. They found that "...(w)ake boats should operate in

20 ft of water or greater when in semi-displacement (surfing) mode to minimize impacts to the lakebed." They also found that "when operating on planing mode, it is recommended that recreational powerboats like the ones studied here, should operate in 10 ft of water or greater to minimize impacts on the lakebed." (SAFL Recommendations provided at a MN COLA meeting – September 16, 2025)

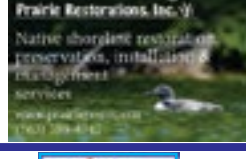
With new data and a rising number of reports from the field lake associations and similar groups began asking what could be done, and what should be done. Do we pass new laws? Are these state laws or local ordinances? Do we need new laws, or can the people just work it out at local levels? Caribou Lake in Cook County created an ordinance that was approved by the DNR. There is now a map of Caribou where it is appropriate to wake surf (locations more than 500 feet from shore AND more than 20 feet deep) that minimizes impacts to shorelines and lakebeds. If all boaters (wake boaters and non-wake boaters) know and respect the ordinance there should be little conflict, at least that's the goal.

The Water Sport Industry Association (WSIA) recently reacted to SAFL's reports with a two-page summary paper. (See pages 5 and 6) WSIA claims that 10 feet of depth and 200 feet from shore is more than enough. Video evidence and SAFL's reports appear to show a different story. See SAFL's videos showing what happens at various depths. You decide.

Bringing it home to Clearwater anyone who has fished

Wakes - See page 7

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The St. Anthony Falls Study Phase II: Faulty Science & Flawed Conclusions

In July 2025, after years of unexplained delay, the Saint Anthony Falls Laboratory released its report on Phase II of its study on recreational boating.

Like Phase I of the study, Phase II is plagued by poor methodologies, inconsistent data, and inaccurate conclusions. Like Phase I, Phase II was never peer-reviewed, and never appeared in an academic or scientific journal. It was funded largely through crowd-sourced donations from anti-water sports activists. And it completely ignores the existence of larger, more powerful vessels on lakes and waterways every day.

This study proves nothing more than what we've known all along – that any type of powerboat, operated irresponsibly or in too-shallow of water, can have an impact on the lakebed beneath it.

Flawed Methodologies

- The study gathered data in two separate years, 2022 and 2023, but used different tools and methods in different years. Researchers collected turbidity data only in 2023 due to a 2022 equipment malfunction, and employed drones for some boats in 2023 but not in 2022.
- The study failed to control for speed, preventing definitive attribution of impacts to wake-enhancing features alone. Wake boats ran at 11.6 mph and non-wake boats at 7-9 mph with no data supporting typical non-wake boat speeds or their time as they transition to plane.
- The study used 15-minute intervals between boat passes, which may not have allowed full sediment resettlement, potentially compounding effects. Data showed sediment disturbance persisting beyond 15 minutes.
- The study tested a limited sample of deck boats, bowriders, and wake boats, excluding other common vessels like pontoons and fishing boats, and used outdated boat models that don't reflect modern watercraft design.
- The study contained data inconsistencies, such as a large turbidity spike for the Malibu 21VLX during a time when the boat wasn't even being tested.

Example: The Malibu 21VLX

Researchers at Saint Anthony Falls conducted tested the Malibu 21VLX using configurations well beyond typical usage, distorting the data and revealing the study's bias:

- The study tested the Malibu boat at 11.6 mph, 4400 RPM, and a 15+ degree pitch, exceeding typical settings of 10.6 mph and 8-11 degree pitch.
- Operating the Malibu at 11.6 mph and at a steep pitch for surfing deviates from standard practice, skewing the results.
- The Malibu's excessive "bow high" posture, indicated by 4400 RPM with the largest engine option, suggests improper configuration. Typical RPMs should be below 4000.
- The excessive pitch intensified sediment resuspension by increasing the downward trajectory of propeller wash, distorting comparisons with other boats.
- Improper weighting of the Malibu likely overstated its environmental impact.



Flawed Conclusions

- The study **did not** make any assessment of the long-term environmental impact of recreational boating on lake floors – it simply indicated slight disturbances on the lakebed in the moments immediately after a vessel passed overhead.
 - The authors themselves acknowledge this, stating "the overall impact...was not quantified in this study, especially in comparison to...stream inflows and wind."
- The study does not prove the impact of wake boats is greater than other boats transitioning to plane.
- Singling out wake boats – and the study's 20-foot depth recommendation -- is not supported by other, peer-reviewed research.

Phase II of the Saint Anthony Falls Study suffers from the same flaws as Phase I, including faulty methodologies, improper testing and data collection, skewed boat configurations, and unsupported conclusions. Like Phase I, this study should not be relied upon by lawmakers and citizens as the basis for future public policy.

Winter discoveries

by Steve Monson, Vice President

There was a nip in the air this morning. The sun is rising later and setting earlier. The trees are showing their autumn colors, and our summer birds are flying South. Winter will soon be arriving in Minnesota. The first snowflakes can arrive any day now.

How many of you have taken a walk after a fresh snowfall? Everything is fresh and clean and looks undisturbed. If you look closely, though, you may see that others have been out before you. Snow has a magical way of recording the passage of all who pass through it. They leave their tracks in the snow.

If you stop and study them, these tracks tell a story. Each animal has a different footprint. You can see whether they are walking or running, how many of them were there and what they were doing. They may have been feeding, sleeping, playing, or just pass-

ing through. Here are a few footprints of animals we see around Clearwater Lake:

There are many more and they can be a fun challenge to identify. For those of you who want to learn more, The Minnesota Department of Natural Resources has a web page dedicated to identifying many animals by their tracks. https://files.dnr.state.mn.us/education_safety/education/project_wild/animal-tracks.pdf

Go there to help you identify the winter citizens of our beautiful Minnesota outdoors.

There are also other online apps to help you out.

iNaturalist and Seek

Developed by the California Academy of Sciences and National Geographic, these apps are powerful tools for general wildlife observation, including tracks.

How they work

You can snap a photo of a track or other animal sign and

Winter - See page 8



Design by Brian Geihl at DogfishMedia.com

Wakes from page 3

Clearwater is familiar with its structure. There are underwater hills and valleys. Fifteen years ago, before we moved here, I dove off my sister's boat and hit the bottom. We were in the east basin and seemingly in the 'middle of the lake' but at that spot it was barely over my head.

I suffered only a bad case of mud, but I was quickly introduced to the lake structure. This is why we've had great fishing but wake surfing over those hills can damage the lakebed. We need a realistic

solution, and a good start is the concept, 'Own Your Wake', meaning be respectful of other boaters, and that goes both ways.

So, do we need new laws, or do we need new ordinances? Or can we handle this informally? Take a look at the data and the videos and draw your own conclusions.

Links

Phase 1 report: <https://hdl.handle.net/11299/226190>

Phase 2 report: <https://hdl.handle.net/11299/274184>

Phase 2 videos: <https://hdl.handle.net/11299/273708>

AIS from page 1

We monitored the arrival of SSW, its distribution and response to treatment through serial surveys conducted by Blue Water Science and led by AIS expert Steve McComas. In addition, biweekly rake toss surveys were coordinated at seven access sites by fellow property owner and Board alumni Tim Ilse. This careful monitoring revealed no SSW growth yet on June 7th. A thick growth of SSW was, however, identified on July 15th within existing boundaries. An expansion of SSW to 5.67 acres in the existing treatment zone as well as a new growth of 1.27 acres in the nearby weed bed was discovered on August 19th. SSW was confined to these two areas totaling 6.94 acres. A new delineation survey on September 11th revealed a significant reduction, but incomplete elimination of

SSW. Consequently, a new permit was obtained for an unprecedented 4th treatment at both sites. This has been approved by DNR and was completed on September 29th.

Our contracted experts at Lake Restorations Inc. led by Paul and Brian Kretsch promptly secured DNR permits and treated the mapped areas of SSW on July 25th, August 26th and September 14th and September 29th.

In closing I'd like to acknowledge the dedication and commitment of my fellow CLPO Board members. Under the leadership of John Hoppe, everyone works tirelessly to control AIS and protect the lake we all love. There has recently been some significant turnover on the Board and new members are needed to support this important work. Please consider joining us if you have the drive and bandwidth for this effort.



WE'RE ON FACEBOOK!

Follow our page to stay informed of important updates!

Winter from page 7

upload it. The app uses artificial intelligence to provide suggestions, and the iNaturalist community of experts can confirm or refine the identification.

Best for

Crowd-sourced expertise and contributing to scientific data.

Animal Tracks

Identifier and Animal Tracks Discovery

These newer apps focus specifically on identifying tracks using AI.

How they work

You take a picture of a track, and the AI analyzes features like shape, size, and pattern to provide a species match.

Facebook animal ID groups: Specific Facebook groups dedicated to animal identification in Minnesota are also excellent resources for comparing your findings with others.

Go on out and see what has crossed your path in the snow. Maybe keep a list of what you find. You may be surprised what is out there.



ARE YOU A MEMBER YET?

If the answer is no, you should be!

Fill out the form on to the right and join your neighbors in protecting the lake we all love know and love today!



Clearwater Lake
Property Owners Association
PO Box 476
Annandale, MN 55302

CLPO Community Register & Membership Form

The CLPO places great importance in being able to communicate to all Clearwater Lake property owners. The contribution made by those choosing to become members is always welcomed & appreciated. Please take the time to complete this form with your contact information in order to receive the lake status updates & event notifications from the CLPO.
The information you share would never be sold or used in any compromising way.

Name: _____

Lake Address: _____

Mailing Address: _____
(Same as Above) ☐

Email Addresses: _____

Phone Numbers: _____

Change ☐

No Change ☐

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Please include this form if paying by check payable to: CLPO
Dues payment or donations can be made online at www.clpo.org

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