LAKE JOHN ASSOCIATION

REGULAR BOARD MEETING MINUTES
September 08, 2025
Approved May 11, 2026
6:30 pm at Southside Township Hall, 8209 County Rd 3 NW, Annandale, MN 55302

Board of Directors (BOD)

OFFICERS	SECTION REPRESENTATIVES
President Joleen Sytsma	Section 1 Dennis Sjoberg
Vice President Chuck Wachter	Section 2 Neysa Silver
Treasurer Jon Bigalk	Section 3 Mark Fournier
Secretary Michelle Sutton	Section 4 John Greenwood
	Section 5 Becky Wachter
	Section 6 Kim Larson

BOD Present: Bigalk, Fournier, Greenwood, Silver, Sjoberg, Sutton, Sytsma, B. Wachter, C. Wachter
BOD Absent: Larson
Members Present: Kelly Kosloski

REGULAR BUSINESS

1. Call to Order
   Sytsma called the meeting to order at 6:30 p.m. with those in attendance invited to recite the Pledge of Allegiance.

2. Approval of Agenda - September 08, 2025
   Motion: Motion by Silver to approve the agenda as presented, **Seconded** by C. Wachter, and **passed unanimously**.

3. Approval of Minutes - July 14, 2025
   Motion: Motion by Fournier To amend the minutes as presented with the addition to Agenda Item 6 to include “concern raised by Fournier - In his opinion, survey type may bias results and cause future issues,” **Seconded** by Sjoberg, and **passed unanimously**.

4. Reports
   A. Financial (January 1 through August 31, 2025)
      Bigalk provided an update on the LJA’s current financials.
   B. Section Representatives - New Property Owners/Property Developments
      New members reported.
   C. LID Liaison Report – Kosloski
      Kosloski reported on the July 17th meeting. An LJA member was present and raised questions regarding bogs and was informed of the LID’s role and LJA’s role in bog management. AIS management updates were provided with planned treatments and costs. Discussion was had on the use of LJA legacy funds funds from before the LID was formed in future bog removal expenses before utilizing LID funds. The next and final meeting of 2025 for the LID at 6:30 p.m. on July 17th was announced.

   D. Committees
      I. Lake Quality & Water Level Monitoring
         Kosloski provided a detailed report provided in the agenda packet and summarized the lake quality and water level. Consideration of having the LID do a Watershed testing was raised. Discussion was had on new developments lacking required buffer, sod extending to shoreline required by developers and responsibility shifting to property owner which is not required.

II. Lake Stewardship Program – Greenwood

Greenwood & Kosloski provided an update, they are now recognized as Lake Stewards.Program requirements were reviewed and are awaiting signage. Recommendation: include program details in the next newsletter and add a link to the website.

III. Culverts – Greenwood

Greenwood provided an update and reported the culvert near launch is down slightly, but flowing steadily. Outflow remains stagnant.

IV. Committee Lists Review

Committee lists were reviewed and the potential need to establish an enhanced wake activities advisory committee was discussed.

ONGOING BUSINESS

5. Migrating Bogs – Fournier

Bog status discussed: Bog location remained as it would not move so it was staked in place. It was brought up that forming a committee could be beneficial. Bog relocation options discussed. DNR advised against relocating the bog to another site; recycling facilities were discussed as an option. Fournier resigned from the bog committee.

6. Lake John Survey Results, Discussion, and Next Steps

Survey Distribution & Return statistics are as follows:

- 150 surveys were sent out; 58 returned (38.7% response rate).
- 3 surveys returned with no numbers marked
- 1 survey appeared to be cut out, uncertain if it was a duplicate copy
- Handed out Survey Results compiled, Written

Discussion on how the survey was established, the structure, scoring system, and acknowledgement that all data should be used cautiously before decisions are made. Also discussed when the next survey should be planned, end of season August 2026 was suggested.

Recommendation: Schedule an April 2026 Board working meeting, prior to May meeting to review survey results and determine potential actions.

Motion by Fournier to publish survey results for members, following review by **Sytsma and C. Wachter for sensitive information** and **Seconded** by Silver, **passed unanimously**

7. Items from July's Agenda

- Section map (GIS) topic from July, volunteer is needed if the Board wishes to proceed.
- Member list Updates, electronic copy of a specific section of the most up-to-date member list to be prepared. Bigalk will update, and send out.
- Discussion of adding email addresses to the website for Section Representatives was brought up again, this was reviewed in the past. Fournier discussed with Dana, and will take the lead, beginning with the section representative list.

8. Community Updates - Sytsma

Sytsma contacted the City of Annandale regarding the City Water/Sewer Project and shared that the grant was not approved; other funding options were being explored. Estimated costs from $40,000 to $60,000 per property owner. Next steps were anticipated for early October.

Community Considerations discussed, approximately 51% of residents are currently considering or in favor. Additional costs not included in estimates would include: removal or capping of existing sewer and wells, connection fees to new system, utility adjustments and potential road widening, assessments would apply to all residents, with interest charges.

9. New Developments

   Update was given that the Shores of Lake John subdivision received final plat approval for 10 lake lots. The shoreline underwent extensive review and adjustments involving the Department of Natural Resources (DNR), Pollution Control Agency, Environmental Protection Agency (EPA), and Soil & Water Conservation District. Multiple requirements and corrective actions were completed to secure approval, ensuring environmental standards and conservation practices were met.

10. Solar Field

    Sytsma provided an update that another meeting was held and Soil & Water expressed concern that the project may be moving too quickly. The process remains ongoing and is Wright County Planning & Zoning ongoing business with an October date pending.Sytsma has prepared a draft letter. **Motion** by Sutton to review and provide feedback by Friday, September 12th, prior to Sytsma sending the letter, **Seconded** by Watcher, **passed unanimously**.

OPEN FORUM Lake John Association Members

With the transition to QuickBooks underway, a request was raised to consider beginning the new budget cycle in May**.** Budget to-Actuals Tracking: This adjustment would allow the Association to align financial reporting with QuickBooks and provide clearer budget-to-actuals comparisons throughout the fiscal year

NEW BUSINESS

11. St. Anthony Falls Research Study - Phase 2 Results

    Discussion included the importance of respectful dialogue, concerns about activities negatively affecting property and personal lives, and a suggestion to focus on solutions that address lake activities and reduce conflicts in alignment with the Lake John Association's objectives "*to promote the care and betterment of Lake John, and to assist in the conservation and preservation of its natural resources.*". The study and its recommendations were reviewed as provided in the agenda packet, and further board discussion will be needed. Handout not in agenda packet, see attached.

12. MN Coalition of Lake Associations (COLA)

    Sytsma shared that there is a September Membership Meeting scheduled for September 16th, via Zoom, 10:00–11:00 a.m. The meeting follows the MPR Special Session on the U of M St. Anthony Falls Laboratory Phase 2 Report, members are asked to pre-register.

13. Wright County Coalition of Lake Association Email

    Email correspondence shared.

14. Adjournment - Sytsma **motioned** to adjourn the meeting at 8:42, Sjoberg **Seconded**, **passed unanimously.**

LJA Meetings	LID Meetings	
2026 May 11 - BOD June 8 - BOD June 27- Annual Meeting July 13 - BOD August 10 - BOD September 14 - BOD	2025 September 18 - BOD	2026 April 16 - BOD May 21 - BOD June 18 - BOD June 27 - Annual Meeting July 16 - BOD August 20 - BOD September 24 - BOD
BOD Meetings: 6:30 p.m. @ Southside Township Hall Annual Meeting: 9:00 a.m. @ South Haven City Hall		

UNIVERSITY OF MINNESOTA
Saint Anthony Falls Laboratory

COLLEGE OF Science & Engineering

Frequently Asked Questions

Report Title: A Field Study of Recreational Powerboat Hydrodynamics and their Impacts on the Water Column and Lakebed. SAFL Project Report No. 611

Authors: Andrew Riesgraf, Jeffrey Marr, William Herb, Matthew Lueker, Jessica Kozarek

What was the study about?
This field-based research project focused on what occurs beneath a recreational powerboat when in motion. Specifically, we studied what happens to the water column and lakebed when different types of recreational powerboats traverse in their typical modes of operation.

Who conducted this study?
This study was conducted by a small team of professional research staff at University of Minnesota, St. Anthony Falls Laboratory (SAFL). The team included:

- Jeffrey Marr, Associate Director of Engineering and Facilities - Principal Investigator
- Andrew Riesgraf – Lead Researcher
- Dr. William Herb - Research Associate
- Matthew Lueker - Associate Engineer
- Dr. Jessica Kozarek - Research Associate

Where can I find the published report and associated data?
The report and all the associated data were published to the University of Minnesota's Digital Conservancy in July 2025. The persistent links to the full report and data are here:

Report: z.umn.edu/powerboats

Data: z.umn.edu/data_powerboats

Where and when was the study conducted?
The study took place on Lake Minnetonka's (Orono, Minnesota) North Arm Bay in 2022 and Maxwell Bay in 2023 during the months of September and October.

What recreational powerboats were tested?
Seven recreational powerboats, categorized into three common boat types, were tested:

- Deck boat with outboard engine
  1. 2016 Hurricane SS203
  2. 2021 Starcraft Limited 2000

- Bowrider with sterndrive (I/O) engine(s)
  3. 2023 Sea Ray SPX190
  4. 2021 Cobalt R5
  5. 2022 Cruisers Yachts 34GLS

- Wakeboat with inboard engine
  6. 2022 Nautique G23 Paragon
  7. 2019 Malibu VLX Wakesetter

The first four boats listed above are typical non-wakeboats that have been operated on Minnesota waters for decades. The Cruisers Yachts 34GLS was the largest boat tested in terms of power and size and fits the description of a yacht. The wakeboats are specifically designed to produce a large wake wave directly behind the boat for wakesports, such as wakesurfing.

How was the study conducted?
The boats were driven over bottom mounted acoustic-based velocity sensors at four water depths (9, 14, 16, and 27 ft) while traversing under their typical modes of operation. For the non-wakeboats (deck and bowrider) this was displacement mode (leisurely cruise) and planing mode (cruising). For the wakeboats this was semi-displacement mode (surfing) and planing mode (cruising). Each boat was driven over the sensors five times for each operational mode to gather replicate data sets for analysis. Additional data sets were collected including various water quality parameters, underwater and aerial videos, and lakebed sediment samples.

What did the study find?
This report identifies three distinct hydrodynamic phenomena produced by common recreational powerboats that have the potential to impact the water column and lakebed: 1) bow and stern pressure waves, 2) transverse gravity waves, and 3) propeller wash.

Bow and stern pressure waves are generated when water is displaced by the boat's hull during motion. The pressure wave that forms at the bow forces water forward and downward, while the stern pressure wave is a restorative motion immediately abaft where water moves upward and backward. The bow and stern waves couple together to form a short-duration orbital wave motion that can extend deep into the water column. ***The bow and stern waves were found to be the primary hydrodynamic phenomena that initiated the movement of lakebed sediments but were not sufficient to cause sustained sediment resuspension and entrainment.***

Transverse waves are gravity waves that result from the interaction of the bow and stern waves and are only produced at slower speeds (e.g., leisurely cruise, surfing). They travel at approximately the same speed as the boat, with the crests aligned perpendicular to the boat's direction of travel, so they appear, from a passenger's perspective, to be a stationary feature of the wake. ***The transverse waves were found to penetrate deep into the water column and persist for several minutes after the boat had passed. The generated velocities were large enough at the lakebed to resuspend and entrain sediment, but the severity was dependent upon the boat type and its mode of operation.***

Propeller wash is a complex 3-dimensional phenomena formed from the high velocity rotational jet produced by the boat propeller(s). Immediately downstream of the propeller, the jet is very powerful and travels along the same alignment as the propeller shaft. The wash expands and slows with increased distance from the propeller. For all the boats tested in this project, and most recreational boats operating today, exhaust gas from the internal combustion engine is injected into the propeller wash jet. The exhaust moves with the propeller wash, dampening energy and providing buoyancy to the propeller wash. As the boat and propeller are moving along the water surface, the direction of the propeller wash is altered by the crossflow effect of the quiescent water, bending the pathway of the propeller wash away from the bottom. The cumulative effect of the exhaust bubbles and crossflow limit the penetration depth of the propeller wash. ***Propeller wash was shown to impact the water column for several minutes after the boat had passed and, under certain modes of operation, contributed to the resuspension and entrainment of bottom sediment. It was further observed that propeller wash can directly cause shearing and complete uprooting of submerged aquatic vegetation under certain operating conditions.***

Can you summarize your findings?
The three hydrodynamic phenomena described above occur simultaneously and move with the boat. We found that the velocities of these phenomena and their depths of penetration are tightly linked to how the boat is used. ***The bow and stern pressure waves are the primary phenomena initiating the movement of lakebed sediments, while the transverse waves and propeller wash are the phenomena that lift and entrain sediment into the water column.***

What is sediment resuspension and entrainment and why does it matter?
Lakebed sediments are comprised of clastic materials (fragments of mineral and rock), organic material (plants and animals), chemical and nutrient precipitates, or combinations of these. The hydraulic phenomena of a powerboat produce water currents and turbulence that can disturb the lakebed and if large enough can cause increased turbidity (i.e., decreased water clarity) by directly resuspending sediments and by indirectly releasing nutrients like phosphorous from sediment that can stimulate excessive algae growth. Resuspension of lakebed sediments has an adverse impact to lakes.

What are your recommendations based on this research?
Based on the study findings, we developed the following recommendations to minimize impacts on the lakebed:

- When operating in ***planing mode***, it is recommended that recreational powerboats similar to the ones studied here, ***should operate in 10 ft of water or greater*** to minimize impacts on the lakebed.
- When operating in ***sustained displacement mode (e.g., slow cruising)***, recreational powerboats similar to the ones studied here, should ***operate in 10 ft of water or greater*** to minimize impacts on the lakebed.
- For most recreational boat users, traveling in waters less than 10 ft deep is unavoidable (e.g., going through channels, getting to and from boat lifts, docks, and launches, etc.). In these scenarios it is recommended to go as slowly as possible (i.e., slower than the displacement speeds tested here or no wake) to minimize the magnitude of the bow and stern pressure waves.
- ***Wakeboats should operate in 20 ft of water or greater when in semi-displacement (surfing) mode*** to minimize impacts on the lakebed.
- All boats have the potential to damage aquatic vegetation. The depth recommendations provided above are specified relative to the lakebed but could also be interpreted as relative to the top of submerged vegetation. Since vegetation grows throughout the open-water season, this is a more difficult recommendation to specify. In general, boats should avoid areas of the lake with aquatic vegetation to minimize damage.

Did this study examine the long-term environmental impacts of recreational boats?
No, this study did not look at long-term impacts to the lake by recreational boating activity. However, because the study methods included five boat passes per test condition, we were able to evaluate cumulative impacts over the short-term (e.g., sediment and nutrient resuspension, damage to submerged aquatic vegetation, etc.).

Are there plans to continue research, and what will be studied?
The final phase of this research is underway and is looking at the following:

- How do wind-driven waves differ from wake waves produced by powerboats and how do their impacts on the lake environment differ from one another?
- How do large wake waves interact with the lake environment, including the lake bottom, shorelines (natural and riprap), structures in the water like docks and lifts, vegetation, and fish habitat?

How was this study funded?
This study was funded through two sources. The first was a crowdfunding campaign through the University of Minnesota Foundation, with over 200 donors contributing. Donations were received from across the country, with the majority coming from Minnesota and other Upper Midwest states. The second source of funding was the Environmental Natural Resources Trust Fund (ENRTF) as recommended by the Legislative-Citizen Commission on Minnesota Resources (LCCMR). ENRTF funding enabled our team to complete additional fieldwork that was needed to publish this report.

Did the report go through a peer-review or technical review process?
This report is not published as a peer-reviewed journal article. However, it did go through an extensive independent technical review process by three external reviewers who are subject matter experts in fields related to this research. The reviewers had no previous or current collaboration with any of the research team and were identified as authors who have published similar research. The reviewers volunteered for the reviewer role.

The review process went as follows: the reviewers were provided a pre-final draft of the report and associated materials (appendix, videos). The reviewers provided detailed feedback as comments and markup. The authors integrated the feedback into a revised report that was then sent back to each reviewer individually. The reviewers reviewed the revised report and each concurred that the authors had sufficiently considered and incorporated their feedback. Each reviewer approved the publication of the final report.

Were donors or other outside groups involved in this research study (design, data analysis and interpretation, report, etc.)?
No. Individuals and organizations that contributed to the crowdfunding of this research had no input in the design or scope of this research project. The development of the report involved only the University of Minnesota - St. Anthony Falls Laboratory research team.

Is the crowdfunding campaign still accepting donations and how can I contribute?
The original crowdfunding campaign has ended but individuals or organizations can still contribute directly to the SAFL Healthy Waters Initiative through the St. Anthony Falls Laboratory website. Donations will go directly to the research program and the next phase of the project.

Donate to SAFL's Healthy Waters Initiative: z.umn.edu/give_healthy_waters

Where can I get more information?
Please visit the project website for additional information.

Healthy Waters Initiative: z.umn.edu/healthy_waters

Who can I contact about this report?
Please send all media requests to **Savannah Erdman**, University Public Relations, at erdma158@umn.edu, or to the University Relations' main news line at unews@umn.edu.