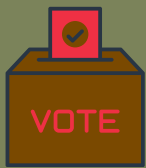


CIRCLE LAKE ADVOCATE



MARK YOUR CALENDARS: 2026 CLID Annual Meeting

Monday August 17, 2026

7:00 pm, Forest Town Hall

3625 Millersburg Blvd, Faribault, MN 55021



»»» CLID OPERATIONS - PONTOON BOAT, AERATOR EQUIPMENT, CLEANING & MAINTENANCE



BONUS TRIVIA QUESTION:
Who played marine biologist Matt Hooper in the original 1975 movie *Jaws*?



You may not be aware that members of the CLID Board and a handful of volunteers tend to all of the equipment design, assembly, deployment, and maintenance tasks around the CLID's operations. Aerator deployment and maintenance has literally brought a lot of heavy lifting to this work.

In order to move equipment and facilitate maintenance, the CLID has purchased a used, bare bones pontoon boat and motor...really just an aluminum barge. A boom (crane) has been mounted to lift the aeration equipment. Each aeration site requires transportation of four large spools, one of 400' of electrical cord, three of aeration tubing. The aerators can be cleaned and repaired on the deck, and transported on deck (with a boat trailer) for maintenance at a board member's mechanical workshop.

»»» **WHAT IS LIMNOLOGY?**

Limnology is the science of how lakes and rivers live, change, and respond to the world around them.

Limnology is the study of inland waters — like lakes and their associated rivers, streams, and wetlands — and how they function, change, and support life. At its core, limnology looks at how water, land, plants, animals, and people are all connected, and how those connections shape the health of a lake or river over time.

What limnologists pay attention to:

- Water quality (clear vs. murky, safe vs. polluted)
- Fish and aquatic life, including invasive species
- Nutrients like phosphorus and nitrogen
- Shorelines, sediments, and erosion
- Impacts from weather, climate, and human activity

Seasonal lake turnover and winter ice can greatly affect oxygen levels for fish. Not all aquatic species in the same body of water have the same low oxygen tolerance.

Examples of limnology sub-specialties:

Physical Limnology – How water moves and behaves.

- Temperature layering in a lake
- Ice cover, wind mixing, and currents
- Water, atmosphere, and land interfaces



Chemical Limnology – What’s dissolved in the water.

- Oxygen levels for fish survival
- Nutrients that can cause algae blooms
- Pollutants and contaminants

In this state of 10,000 lakes (officially 11,842 that are 10 acres or larger), limnology helps explain why some lakes are clear and healthy while others struggle with algae, low oxygen, chemical impairments, and/or invasive species.

Biological Limnology – Living organisms in the water.

- Fish, plankton, aquatic plants
- Food webs and ecosystem balance

Watershed (Catchment) Science – How land affects water.

- Runoff from farms, roads, and neighborhoods
- Why “what happens on land ends up in the lake”



Paleolimnology – Reading a lake’s history.

- Sediment layers that show past pollution, climate, and land use
- “Mud as a history book”

Applied Limnology / Lake Management – Putting science into practice.

- Reducing algae blooms
- Restoring lakes and wetlands
- Managing fisheries and water quality
- Allowing for recreational and water use

Healthy lakes don’t happen by accident — they reflect the health of the land, water, and community around them.

NAVIGATION WARNING:



PLEASE STAY AT LEAST 50 FEET AWAY FROM THE AERATION SITES.



Each surface aerator is secured with three 80 foot anchor lines, flanked by three bottom aeration devices, and connected back to shore for air and power. Please do not anchor around the arrays or between an array and shore.

>>> **CIRCLE LAKE AERATION PILOT EXPANSION - SUMMER 2026**

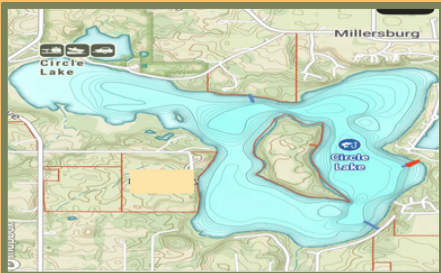


Surface aerator in Benjamin Bay, winter 2025-2026. Note the connection lines in the foreground and thin ice sign posts in the background.

Continuing Objective: To develop, test, and implement a designed aeration system to raise dissolved oxygen (DO) levels sufficient to maintain a healthy game fish environment year-round.

In spring 2026 three surface aerators, each surrounded by three bottom small bubble aerators, will be placed strategically around the lake. Each array will be approximately 400 feet from shore, with small buoys over the bottom aerators and the surface unit illuminated at night for safe navigation. Preliminary results from the Benjamin Bay site have shown how the oxygen plume behaves with depth. Stay tuned for more science!

Three aerator system locations for summer 2026. Red tick is the Benjamin Bay location, blue ticks are two additional locations (tentative).



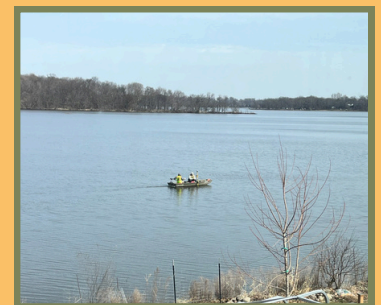
The CLID purchased a lake sensor that will be moved around the aeration sites to show changes in oxygen dispersal and water chemistry. Readings will be taken at different depths for oxygen, phosphorous, chlorophyll-a, cyanotoxins, e-coli and other markers of lake health. Sensor data will be combined with monthly water sampling to better understand lake chemistry dynamics.



>>> **MORE DATA - CIRCLE LAKE BATHYMETRY**



In April you may have seen this small boat traversing the lake. These are specialists from ISG, acquiring advanced bathymetry (sonar) data across the lake. With the CLID now compiling a large lake database, this benchmarked* depth data can be integrated to increase our understanding of temperature stratification, depth dependent water chemistry, and degradation of biomass at the lake bottom.



**To a permanent survey marker on the dam.*



»» YOUR BOARD

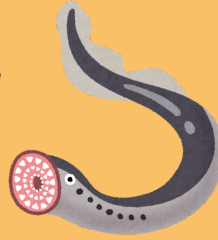


Dean Sunderlin, Chair
 Bill Houston, Vice Chair
 Cheryl Bahnsen, Treasurer
 Denise Klokow, Secretary
 Carl Bahnsen
 Jeff Jirik
 Stefanie Johnson
 Ryan Nugent
 Dawn Cherwinka

»» TRIVIA

Which lamprey species is native to Minnesota?

- A. chestnut lamprey
- B. silver lamprey
- C. sea lamprey
- D. A & B
- E. none of the above



»» TRIVIA ANSWER

What is the predominant cause of elevated mercury (Hg) in southern MN lakes?

D. atmospheric deposition

Mercury release generally comes from from coal-fired power plant, metals processing, and waste incineration operations. Minnesota receives substantial mercury pollution from regional and global atmospheric transport associated with the mid-latitude westerlies.

»» RESOURCES



The CLID communicates with agencies and organizations across Minnesota. Here are links to various websites that have information presented in community friendly, educational, and occasionally technical language. If you find other sources of valuable information, please feel free to post those on the CLID [Facebook page](#).

Knowledge reduces risk, expands opportunity, and inspires change.

Rice County Soil & Water Conservation District (including monthly newsletter)

<https://www.riceswcd.org/>

University of MN - Aquatic Invasive Species Research Center (MAISRC)

<https://maisrc.umn.edu/ais-detectors>

MPCA Volunteer Water Monitoring Program

<https://www.pca.state.mn.us/get-engaged/volunteer-water-monitoring>

Cannon River Watershed Joint Powers Organization

<https://www.cannonriverwatershedmn.gov/>

MN DNR Fisheries

<https://www.dnr.state.mn.us/fisheries/index.html>

Clean River Partners

<https://www.cleanriverpartners.org/>

MN Lakes & Rivers

<https://mnlakesandrivers.org/>

Healthy lakes build healthy communities

Minnesota's lakes are finite, living systems.



Clean water is Minnesota's greatest natural inheritance.

