The
Chatty Loon

Upper South Long Lake Improvement Assn. Newsletter
P.O. Box 201, Brainerd, MN 56401

August, 2014
Edited by Dan Martonik

In this issue:

President's Message

Greetings to the Upper South Long Lake community! I hope that everyone has had a great time at "the lake" this summer.

We have had very positive feedback regarding the new USLLIA Loon signs and association membership is at an all time high due to the ongoing efforts by Don Crust and the membership committee.

We continued to aggressively treat for Curly Leaf pondweed and AIS inspections at the public access. Some good news is that the state allocated $10 million to fight AIS so we are working closely with Crow Wing County, the DNR and other agencies to receive additional funding and to put programs together to accelerate efforts.

The USLLIA BOD continues to partner closely with the USLL LID BOD in planning and funding lake improvement activities.

This summer we were once again challenged with heavy early summer rains resulting in high water and then low water levels due to problems with the dam running to the lower lake (see article). A number of people will be getting their props fixed as a result.

Thanks for your ongoing support and lake stewardship.

Ron Trosvig, BOD President

2014 Spring and Summer Water Quality Report

1. We continued testing water samples with RMB Environmental Laboratories, Inc.

2. Secchi readings so far this summer:

May	7.0
June	8.0
July	7.0
August	7.0'

4. Previous results can be viewed in detail by going on line to www.rmbel.info.

6. We contracted with Professional Lake Management, Inc. (PLM) to treat curly leaf pondweed. They treat with Aquathol K, and depending on the size and location of the weed bed, the rate of application ranges from .5 to 1.5 ppm. This is within the guidelines as set forth by the DNR.

7. The acreage treated this year was 32.95.

Respectfully submitted,

Daniel J. Martonik, Committee Chair

Association Board of Directors

Ron Trosvig, President

Dan Martonik, VP

Don Crust, Treasurer

Mike Simons, Secretary

Terry Lahti, Past Pres.

Jeff Gans

Chuck Yancey

Gerald Spande

Judy Brazeman

John Bettencourt

Jim Bitter

Randy Peterson

Assn. Board Welcomes New Secretary

The USLLIA BOD would like to welcome **Mike Simons** to the board. Mike has also graciously volunteered to become the board's Secretary, which fills a long overdue vacancy. Mike is currently serving as the secretary for the LID board and is also a board member of the Lakes And Rivers Alliance, better known as LARA.

From the LID President

In mid-July, the 2014 LID Membership Meeting was conducted at the Green Lantern. Election results were announced, and the following members were elected to the 2014/2015 LID Board:

Ruth Naber, Mary Reetz, and Mike Simons.

They join current board members Gary Hopping, Chris Psotka, and Bruce Dybvig, and following the membership meeting, the following were voted as officers:

Bruce Dybvig, Pres.; Mary Reetz, Vice Pres.; Mike Simons, Secr., and Gary Hopping, Treasurer

Goals and objectives for the LID continue to be:

- Funding for treatment of invasives
- Educating membership on issues to keep Upper South Long Lake healthy, beautiful, and an amazing ongoing resource for our use today as well as the future
- Monitor the lake via water testing
- Work closely with the DNR, USLLIA, and other organizations that monitor and work for a clean watershed
- Share in the funding for inspections at our boat landing.

continued ⮥

Next year will be our 5th year of existence, at which time we will be required to re-apply to Crow Wing County to extend our existence for another 5 years. It will also be our opportunity to re-evaluate our current goals and financial position, and make any adjustments necessary to continue our resource for the benefit of Upper South Long Lake.

In closing, we appreciate our partnership with USLLIA, and will continue to work closely together as we move forward in our respective resources for the lake.

Respectfully submitted,
Bruce Dybvig, LID President

Membership Committee

ASSOC. MEMBERSHIP AT RECORD-HIGH

Unless someone remembers differently, dues-paying membership in the Association just hit a record high. The count is 160 and growing!

It was easy this year, says Membership Chairman Crust. We stuffed an envelope in the last newsletter which resulted in about 75% of the 160. The rest came in after sending a reminder. The new member signs installed on the fire number posts helped too.

Members understand the relationship of the Association and LID. The two are compatible, each supplementing the other. While the bottom-line finances of both organizations are growing comfortingly, the job of keeping our lake pristine keeps getting bigger each year.

We need to work together from all angles. Drive around the lake some day. If a member sign is missing on the fire number post, give a gentle reminder to the owner that there are benefits to joining. Dues are only $25 payable to USLLIA, PO Box 201, Brainerd 56401.

Dan Crust, Committee Chair

Resources for Improving your shoreline

Although the shoreline of Upper South Long Lake appears to be in good shape overall, all of us could probably do a bit more to improve it. Your efforts might be to stabilize the shoreline to prevent erosion, limit nutrient run-off into the lake, improve habitat for aquatic or shoreline animals, or just to beautify it.

Here is a list of sites and sources that residents might utilize to assess their shoreline and look for ways to improve it:

Score Your Shore: www.dnr.state.mn.us/scoreyourshore/index.html
Use this as a tool to assess the current condition of your lake lot.

Restore Your Shore: www.dnr.state.mn.us/restoreyourshore/index.html
Find ideas on how to improve your shoreline to provide better habitat and to reduce the amount of nutrients seeping into the lake.

Lists of suggested native plants:
SWCD (Soil and Water Conservation District) has a hand-out available in their office in the Land Services Bldg in Brainerd. DNR website: www.dnr.state.mn.us/restoreyourshore/pg/index.html Or www.dnr.state.mn.us/gardens/index.html

Native Plant area distributors/suppliers:
SWCD has a hand-out available DNR website: www.dnr.state.mn.us/gardens/nativeplants/suppliers.html

Ruth Naber, LID Board Member

2014 LID test results

Water quality testing continues at the four major inlets to Upper South Long Lake. The LID began testing in 2012 at the Silver Bay Road inlet and the Paradise Shores area inlet. Testing was expanded to the inlet near the end of Rognaldson Road and the Nokasippi River inlet in 2013.

Samples are taken three times yearly: spring runoff, non- rain period in July, and September. At this point, we are mainly wanting to establish baselines and watch for severe fluctuations. For the tests so far in 2014, one result worth watching is the pH at the Paradise Shores inlet. It has dropped to 6.43 in April and 6.47 in July. Sources indicate that when the pH is below 6.5 it can affect fish spawning and solubility of metals.

None of the other inlets is below 7 and the expected range for our ecosystem is 7.2 - 8.3.

The LID link can be found on the USLLIA website, (www.usllia.org).
There are documents posted to explain the various tests and benchmarks. Each fall, a summary of the testing is posted to the LID portion of the website.

Watch in late fall for a more complete summary of the 2014 test results and comparison of the various inlets.

Ruth Naber, LID Board Member

The Dam Story

By Dan Martonik

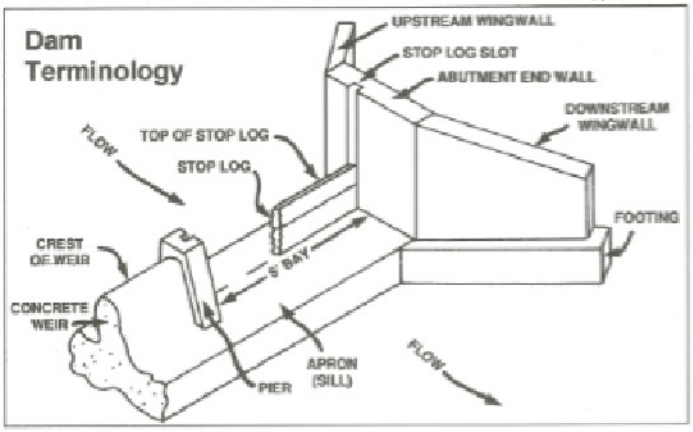
On June 16, 2014, long-time resident and association member Tom Montour noticed that one of three stop logs that lay end-to-end, (all at the same level), was missing from the dam that is located between the Upper and Lower Lakes. No one knows when the damage occurred.
Tom notified Ron Trosvig using USLLIA email, who then passed it along to Bill Kronstedt (Maple Grove Township Supervisor) and myself. The three of us, (Tom, Bill and myself) went down to the dam and Tom was able to point out the problem.
We all agreed that it was a potential lake level problem that needed to be fixed.
Bill called the DNR in St. Paul and I called the local DNR here in Brainerd to explain the problem, (it took more than a few tries to finally talk to the right people). The local DNR sent personnel out to confirm the problem and at the same time took measurements for a stop log replacement.

Several factors led to 2 months worth of red tape and delays from when we reported the problem, June 16th, to when the dam was actually fixed on August 15th. Funding, contracting and obtaining custom materials were just some of the "red tape".

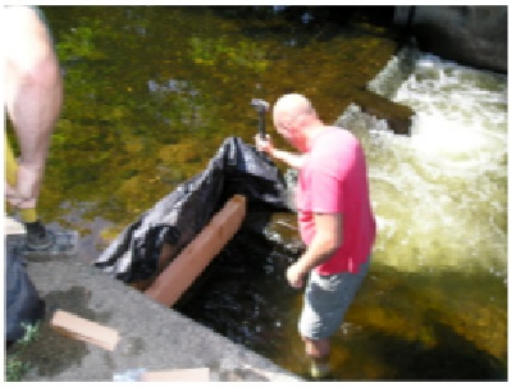
The new stop log was custom milled from one solid piece of Douglas-fir. The dimensions are 3 inches thick, 8 inches high and 51/2 feet long. The log was pounded into the stop log slots. After expansion of the wood, it is an extremely tight fit.

Our dam is just one of over 300 that the DNR is charged with maintaining in Minnesota.
Most of these dams were built in the 1930's. Ours was built in 1936.
The top of the three stop logs for our dam are set at 1193.5 feet AMSL. The elevation is checked every 5 years by the DNR. The DNR does not allow additional stop logs to be added to this dam.

The drawing below was taken from the DNR's web site and illustrates the basic dam design. Our dam is a variation of this design.
Some of the variations include:
1. Our dam is only one top stop log high. The drawing shows two logs stacked, but our lower "stop log" is made of concrete.
2. Our dam has three 5' bays, each with it's own stop log (the drawing shows one)
3. Our dam has two piers, (the drawing shows one). The other one holds the center stop log and one end of the third stop log. Our two piers have stop log slots on both sides.
4. Not noted is the fact that our stop log slots on the main sides of the dam are made of steel, surrounded by concrete.
5. Our dam does not have a concrete weir as shown in the diagram.



Joel Jacobson, from Jacobson Landscaping, carefully measures the cut line for the new stop log.



Joe Hall, from Jacobson Landscaping, installs the new stop log.

The stop log in it's new home.

4th of July Boat Parade

Flyboarding comes to Upper South Long Lake!

4th of July boat parade participants got a real treat out on the lake. Some one, we don't know who, showed viewers what Flyboading is all about. A **Flyboard** is a type of water jetpack attached to a personal water craft (PWC) which supplies propulsion to drive the Flyboard through air and water to perform a sport known as flyboarding. A Flyboard rider stands on a board connected by a long hose to a watercraft. Water is forced under pressure to a pair of boots with jet nozzles underneath which provide thrust for the rider to fly up to 15 metres in the air or to dive headlong through the water.

Watershed Session at Cragun's Resort

May, 2014 Reported by Mary Jane Reetz

I attended only I day of the session as my interest is mostly Watershed management. Speakers got us all on the same page by covering definitions of watershed terms: theatre, watershed, hydrology, geomorphology, connectivity, BMP's etc.

We discussed the new WRaPS program, a computerized method of evaluating
your watershed. WRaPS stands for **W**atershed **R**estoration and **P**rotection **S**trategies. It indicates pollution problems and protection strategies, comparing them to other watersheds That have been evaluated. Paul Radomski talked about the pollution from non-point sources. A lawn that is mowed down to the shoreline adds 7-9 times more **phosphorous** than one that is natural or has a good buffer.

"Incomplete perceptions produce incomplete understanding" Paul recommends we go snorkeling and see what the underwater vegetation looks like. The lake and its watershed are a system, not a collection of objects. Sodium Chloride is a common pollutant. The sodium washes into lakes with soil particles and the chloride comes in with water. It comes mostly from highway runoff of salts. A reading of <8 is very good, but a reading of >12 and all you have is carp and suckers.

How about Nitrates (NO3)? A reading of 10 or greater causes "blue baby syndrome", Nitrate can change to many forms. It occurs naturally in the atmosphere as N2 at a rate of less than 3mg/l. This is why the Dept of Health encourages deep wells and not shallow point ones to get below the area where N2 is active. There isn't enough room to discuss pesticides. We all need to be cautious with them.

There was discussion about development and how many docks can there be without affecting the fish population. Fish nesting success declines greatly if there are more than 15-20 docks per mile of shoreline.

WRaPS sites examples of Protection Strategies which would include education, land use, zoning and BMP's(Better Management Practices).

A farmer from near Rochester discussed the results they had after going through the WRaPS program. Communication and relationships were strengthened, a group of community water advocates was formed, clean up practices were done in the watershed and it increased everyone's appreciation of the resource they have. It helped with conflict management, motivated people to do something and resulted in new emerging leaders.

As Mahatma Gandi said: **"Be the Change!!"**

Efforts to Stop Aquatic Invasive Species

At our May USLLIA meeting, it was mentioned that the University of Minnesota has an Invasive Species Center. That following week, two articles appeared in newspapers on this topic. The Minnesota Daily newspaper wrote about the Minnesota Aquatic Invasive Species Center on the St. Paul campus. (Aquatic Invasive Species are plants and animal species that are not native to Minnesota and cause economic or environmental harm or harm to human health.) The Center's founder, Peter Sorensen, was moved from director to full-time researcher. This came as the center received funding for a project to create Asian carp barriers along the Iowa border. Removing the director duties will allow Sorensen to focus on researching methods for controlling invasive species such as Asian carp. "The rapid speed of invasive carp northward along the Mississippi River has intensified the need for research. If left unprotected from species like Asian car, zebra mussels and curly leaf pondweed, lake and river systems could be "turned upside down" and become overrun with non-native species", said the center's associate director, Becca Nash.

Last year Asian carp eggs were found just below the Mississippi River's Lock and Dam 8 near the Minnesota-Iowa border. Therefore installing underwater speakers (an $854,000 project funded by the Environment and Natural Resources Trust Fund to be completed by July 1) is a priority for the center.

The Center's laboratories will undergo renovation in winter. This will launch a new level of research by bringing the facility up to a standard that is able to support high-quality science. (Source: Minnesota Daily May 28-June 3, 2014 .

An article in the Crow Wing Power News stated that Ruth Lake Improvement District and Crooked Lake Township applied and received Level 1 & 2 grant funding. The state grant program covers costs for boat landing inspectors at waterways. Level 1 and 2 Aquatic invasive species inspection programs were developed by the Minnesota DNR. Level 1 is used to fund trained landing inspectors and Level 2 funds inspectors at landings where a portable decontamination unit is used. The unit must be purchased or rented by the entity applying for the grant—typically lake associations. Decontamination units use hot water and heavy jet sprays to clean watercraft.

In Minnesota, there are now 25 DNR owned and operated decontamination units that are portable and used at high traffic landings and locations. (Source: Current Connection, March/April 2014).

An article in the Star Tribune stated that a $12 billion dollar water transportation infrastructure bill was passed in May and includes a lock-closing provision. The Upper St. Anthony Falls Lock on the Mississippi River in downtown Minneapolis will be shut down in a year in an effort to keep invasive carp from spreading northward to Lake Mille Lacs and other waterways.

The invasive species, bighead and silver carp, weigh more than 100 pounds. Asian carp are capable of eating from 20-120% of their body weight each day. They disrupt ecosystems and outcompete native fish for food. The state also has to deal with the invasive carp in the Minnesota and St. Croix Rivers; those are totally unprotected. Gary Botzek of the STOP Invasive Coalition said closing the lock is essential to protecting the $4 billion boating and fishing industries bring to the state every year. (Source: Congress moves to lock out carp, Star Tribune May 28, 2014.

A 25-minute video on Aquatic Invasive Species/Minnesota Waters at Risk is available on the DNR website. You can also receive a hard copy of this DVD by contacting Keri Hull at the local DNR office at 218-833-8737 or keri.hull@State.mn.us. The DNR web address is http://www.dnr.state.mn.us/invasives/aquatic/index.html.

Submitted by:

Bonnie Marten

Lake Association Member

Lakes contain various algae and scums throughout the year, so how do you know which are natural and which can cause harm to humans or to the lake? Today, I'll describe some of the most common substances that lake users will come across.

First of all, have you ever seen a stream, wetland, pond or ditch with a rust-colored substance all over the bottom and sides? Commonly, if you see this substance you may also see an oily film on the surface of the water. Although this looks like pollution, it is actually not. In areas that have iron-rich water, ground water seepage, and low flow, naturally occurring bacteria called Iron Bacteria oxidize iron for energy. The by-product is ferric iron, which becomes iron oxide when it is exposed to air and water. Iron Bacteria are not known to pose any environmental or human health risk.

Iron Bacteria

Lake Learning
Algae and lake scums

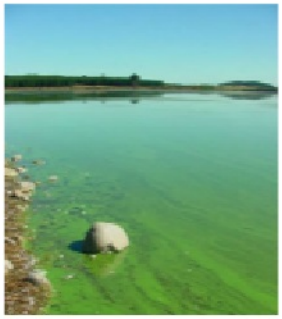
Shoreline foam

What causes the foam that forms along the shoreline on a wavy day? Most foam, if it is fishy smelling, is natural and is made up of natural organic compounds. As aquatic organisms decompose (fish and algae), they release these organic compounds, which mix with the air during wave action and form foam along the shoreline. If you see foam that smells perfumed or soapy, it could be from detergent or soap. Bathing in the lake is fun, but it is better for the lake if you avoid it. If you do bathe, make sure you use a product that is phosphorus-free, breaks down naturally, and doesn't leave a film or foam on the top of the water. This kind of soap can usually be found in camping or outdoor supply stores. Soap film on the surface of the water hurts the aquatic insects (water striders) and spiders that walk on top of the water by breaking the surface tension. The insects and spiders then fall in the water and drown.

What causes algal blooms and why are there different looking algae throughout the summer? First of all, algae are a natural part of a lake's ecosystem. They are food for many aquatic organisms and they produce oxygen in the water. Algae become a nuisance when they form dense mats and smell as they decompose. The decomposition process also uses up oxygen, which other aquatic organisms such as fish need for survival.

Different types of algae grow best in different conditions, and lakes usually go through a cycle of algae blooms throughout the season. In late spring, diatoms are the most plentiful. They are tiny algae and turn the water brownish, but usually don't form smelly mats on the lake surface. Later on in the dog days of summer, blue-green algae (Cyanobacteria) dominate and can become a nuisance. When blue-green algae cause the water to look like blue paint, there can be a chance that toxins are present. These toxins can be harmful to pets and children if ingested, so it is best to avoid swimming in these conditions. Blue-green algae are not always toxic, and so far we are unable to predict when they will occur. For more information on toxic blue-green algae, visit: http://www.pca.state.mn.us/water/clmp-toxicalgae.html.

Phosphorus is food for algae, so usually the more phosphorus is in the lake, the more algae there will be. You can decrease the amount of phosphorus being added to the lake by making sure your septic system is properly maintained, not fertilizing your lawn, and constructing a buffer of native plants along the shoreline to filter and absorb runoff.



Cyanobacteria (Blue-green algae)

Filamentous Algae

Enjoy the lakes! This article was written and shared by Moriya Rufer at RMB Environmental Laboratories as part of continuing education for their Lakes Monitoring Program (218-846-1465, lakes@rmbel.info). To learn more, visit www.rmbel.info.

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