

# LAKE TALK



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A NEWSLETTER DEVOTED TO STEWARDSHIP OF THE LOWER RED CEDAR RIVER BASIN  
P.O. BOX 185, MENOMONIE, WI 54751 Summer 2009

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## **Annual Meeting July 14<sup>th</sup>**

The Annual Meeting will be held at the Tainter Town Hall on July 14<sup>th</sup> at 7:00 P.M. The meeting will be preceded by a pot luck lunch at 6:00 P.M. The terms of three members of the Board of Directors are expiring so there will be voting to fill these positions. In addition, there are amendments to the By-Laws proposed and they will be voted on. Membership forms will be available at the meeting. The membership year starts July 1<sup>st</sup> and your dues may be tax deductible as the Lake Association is an IRS Subsection 501(c)(3) organization.

## **Board President Attends WAL Workshop** by Robyn Morin

On March 20, 2009 I had the opportunity to attend one day of the Wisconsin Lakes Convention. I attended a one day workshop entitled "How to Run an Effective Lake Association."

The workshop included the following information: insurance coverage for both association and board member liability, the new IRS rules for 501(c) 3 Non Profit organizations, Roberts Rules of Order, and web site hosting.

The workshop provided an excellent refresher on Roberts Rules of Order, as well as provided in depth information on the new IRS annual filing requirements.

The insurance workshop highlighted several areas that the board will be reviewing in our current policy to see that it truly reflects the needs of the TMLIA.

Although most of the areas covered are behind the scenes type of activities, their importance can never be underestimated. This workshop served as a good refresher course in some areas, while opening doors to other avenues we should consider to insure that the TMLIA continues to be a vital and growing organization.

## **Update on Stream Monitoring** by Ted Ludwig

The Lake Association is continuing its involvement in the Water Action Volunteers which is a statewide program for Wisconsin citizens who want to learn about and improve the quality of Wisconsin's streams and rivers. The program is coordinated through a partnership between the Department of Natural Resources and the University of Wisconsin – Cooperative Extension. We are currently monitoring 7 sites and will add 3 more during June. There are eight people, not all of them members, working on the sites coordinated by the Association. These volunteers monitor 6 water quality parameters in streams that can be waded into safely. The parameters monitored are dissolved oxygen, temperature, transparency, flow, habitat, and macroinvertebrates. Beaver Creek Reserve is the area coordinator for the program and they trained the participants.

We are also involved in a joint project called the Red Cedar River Basin Monitoring Group, which is composed of TMLIA, UW-Stout, and the school districts of Colfax and Menomonie. Students will be gathering information related to the problems of the Red Cedar and presenting this information to the public in various ways to help citizens to make better choices regarding water quality. A grant has been received from Wisconsin's Citizen-Based Monitoring Partnership Program to help fund the project.

### **Barley Straw Project Overview** by Scott McGovern, Biology Lecturer, UW-Stout

In spring, 2008, the Tainter Menomin Lakes Improvement Association (TMLIA) received a three year Department of Natural Resources (DNR) permit to place barley straw into four bays of Tainter and Menomin Lakes to inhibit the growth of blue green algae, specifically cyanobacteria. The algae bloom counts were taken and analyzed by Scott McGovern, UW-Stout Biology Department. Due to inconclusive test results, project scale and funding, the project will not continue.

#### **What's so harmful about the blue green algae blooms anyway?**

Blue green algae, or more correctly named cyanobacteria, produce toxins that affect the diversity of plants and animals. Cyanobacteria take over like an invasive weed and dominate the ecosystem inhabited. The toxins are also hazardous to humans.

#### **Can't we just spray the algae or kill it with a chemical?**

Various chemical substances are available for eliminating cyanobacteria; however, chemicals such as copper sulfate kill the colonies causing the toxins to be released abruptly. This causes even more damage to the environment and possible health concerns for humans and animals using the water for recreational activities; consequently, chemical control is discouraged.

#### **Why and how did we use barley straw?**

If we could use a substance to inhibit the growth of cyanobacteria rather than cause the outright death of the organisms, we may be able to control cyanobacteria growth. Worldwide, barley straw has been shown to inhibit cyanobacteria growth.

The barley straw was packed into nylon mesh bags and placed in four bays secured with ropes attached to land. The bags stayed in the lake until fall 2008. The TMLIA asked Scott McGovern, a member of UW- Stout's Biology Department to collect samples and perform tests throughout the summer. While TMLIA volunteers placed the bags in spring, McGovern, UW-Stout Bio 101 students and members of the TMLIA removed the bags as a service learning project during fall 2008 and spring 2009.

#### **What tests were done and what were the results?**

The test methods were the same as used by the World Health Organization. While cyanobacteria lives in colonies that make them visible to the naked eye, the counting of the cells within colonies is done with a microscope. The colonies are separated into individual cells by sonic waves or boiling. The broken colonies are counted as individual cells on a medical slide called a hemacytometer.

Throughout the 2008 summer, McGovern gathered samples and analyzed the data. Colony counts in bays treated with barley straw lagged behind untreated bays at the beginning of the summer. However, once the full bloom approached in mid-late August, it was impossible to see a difference.

### **Why stop now if it worked elsewhere? Why not, here?**

Based upon negligible results, the DNR terminated the project. Several reasons are suggested for the lack of visible results including:

Time of placement: The most effective results with barley are those areas that can place the straw at least three months prior to the bloom. In Wisconsin, the ice is not always out by the end of March and the bloom starts, depending on the temperature, sometime in early to mid June.

Lack of proper microbes: Another aspect of using barley straw successfully is that the microbes break down the material to inhibit cyanobacteria growth. It has been suggested that North America may lack the proper microbes that effectively breakdown barley straw that in turn release the growth inhibiting properties. Research on barley straw has shown that in North America it often fails to inhibit the cyanobacteria for reasons that are not yet clear.

Quantity and labor required: Further discussion with cooperating partners (UW-Stout, DNR and TMLIA) concluded that the quantity of barley straw needed to inhibit cyanobacteria on a lake scale was impractical due to the economy of scale and labor costs.

### **Is there anything that can be done to “clean the green”?**

Efforts to find new methods for cleaning the green are still being pursued by TMLIA, DNR and UW-Stout. The last remnant of the barley straw was removed this spring from Tainter Lake by the TMLIA volunteers and UW-Stout students. These service collaborations continue with water testing projects, health surveys and buffer zone improvement projects.

As individuals, all property owners can reduce or avoid using phosphorus fertilizers which causes run-off into the lake. Property owners can also consider a buffer zone garden. See the TMLIA sample buffer garden at Lamb’s Creek Bridge Park across from Jake’s Supper Club. The TMLIA also welcomes all concerned citizens looking to address this issue.

## **Nitrate Stimulates Greenhouse Gas Production in Small Streams**

*ScienceDaily (Apr. 1, 2009)* — Nitrous oxide is a potent greenhouse gas that has been accumulating in the atmosphere since the industrial revolution. It is well known that fertilizer can stimulate nitrous oxide production in soils, but less is known about nitrous oxide production in small streams which drain agricultural landscapes.

Much of the cropland in the agricultural Midwest is drained by an extensive subsurface drainage network which delivers soil-derived nitrate to small streams where it may be converted to nitrous oxide. Given the large quantities of nitrogen that leach from agricultural soils and the predominance of small streams in Midwestern agricultural landscapes, small streams may an important source of nitrous oxide.

In a study funded by the National Science Foundation, scientists from the University of Notre Dame measured nitrous oxide production rates in sediments collected from small streams across an agricultural land use gradient in southern Michigan. Results from the study were published in the March-April 2009 issue of the *Journal of Environmental Quality* and were presented in 2006 at the 49th Annual Meeting of the North American Benthological Society.

During 2004 through 2006, twelve streams were sampled approximately monthly each year. Sediment nitrous oxide production rates were measured using anoxic incubations in the laboratory. The study design allowed the researchers to assess spatial, seasonal, and inter-annual variation in nitrous oxide production rates.

The study revealed that nitrous oxide is frequently produced in the sediments of small streams and that production rates were best explained by stream water nitrate concentrations. The highest production rates were observed during the winter and spring of the second year of the study when snow melt and rain flushed nitrate into the streams resulting in elevated stream water nitrate concentrations.

The scientists' findings suggest that nitrous oxide production rates from sediments in small streams are linked to nitrate availability. Therefore management efforts to reduce nitrous oxide production should focus on limiting nitrate transport to stream ecosystems. Such management efforts might entail reduced fertilizer application rates to agricultural soils, restoration of the riparian zone for nitrogen attenuation, or modification of tile drains to reduce nitrogen export to streams.

Dr. Jake Beaulieu, the lead author of the study, is now a postdoctoral research associate with the Environmental Protection Agency. Dr. Beaulieu's current research is focused on nitrous oxide dynamics in large rivers. An important distinction between large rivers and small streams is that large rivers have deeper, more turbid water columns which may support nitrous oxide producing bacteria. The combination of nitrous oxide production in both the sediments and the water column may yield particularly high areal nitrous oxide production rates in large rivers.

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**Journal reference:**

1. Beaulieu et al. **The Effects of Season and Agriculture on Nitrous Oxide Production in Headwater Streams.** *Journal of Environmental Quality*, 2009; 38 (2): 637 DOI: [10.2134/jeq2008.0003](https://doi.org/10.2134/jeq2008.0003)

*Adapted from materials provided by Soil Science Society of America.*

Soil Science Society of America. "Nitrate Stimulates Greenhouse Gas Production In Small Streams." *ScienceDaily* 1 April 2009. 2 April 2009 <<http://www.sciencedaily.com/releases/2009/03/090330111259.htm>>.

## **Members!!** by Dick Lamers

We hope that every Lake Association (LA) member will do something to get involved. Whether it is joining one of our many active committees or contributing your ideas in the development of the goals and objectives of the organization. Comments are always welcome. Active participation is the key to developing a strong organization.

Today, we'll give you some details on how easy it is to be part of that "mysterious" **Political Process**. It is a critical part of cleaning our waters in the Red Cedar Basin. Madison recently passed legislation banning phosphorous (P) in lawn fertilizers. Next up is working on the ban of P. in dishwashing detergents or other subjects that the LA feels will promote the improvement of our water quality.

**Call, Write, e-mail, or Meet** with your elected officials. They have a "thousand" things on their agenda. So if we have more people putting our information forward, it will create a better chance of making a difference.

**Meet:** Frequently the officials announce listening sessions in our area. This is a great opportunity to voice your opinion face to face with them. You could also schedule a meeting with them at their offices or attend public hearings in Madison.

## Call, write, or email:

### STATE

District Number 23  
Senator Pat Kreitlow  
[Sen.Kreitlow@legis.wisconsin.gov](mailto:Sen.Kreitlow@legis.wisconsin.gov)  
(608) 266-7511 or (888) 437-9436  
\*\*\*\*

District Number 67  
Representative Jeffrey Wood  
[Rep.Wood@legis.wisconsin.gov](mailto:Rep.Wood@legis.wisconsin.gov)  
(608) 266-1194

Who is my representative?  
<http://waml.legis.state.wi.us/>  
\*\*\*\*

Central Region Wisconsin Department of  
Natural Resources:  
(715)839-3714  
fax: (715) 839-6076

### FEDERAL

**Sen. Russ Feingold**  
[http://feingold.senate.gov/contact\\_opinion.html](http://feingold.senate.gov/contact_opinion.html)  
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**Sen. Herb Kohl**  
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**Rep. David Obey**  
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**Rep. Ron Kind**  
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Eau Claire, WI 54701  
Phone: (715) 831-9214

ARMY CORPS OF ENGINEERS  
Marita Valencia, St Paul, MN.  
Phone: 651-290-5364  
for Dunn County

### **Lambs Creek Preservation Project** by Bill Olson, co-chairperson, TMLIA education committee

Whether a national organization, such as the Environmental Protection Agency (EPA) or Center for Disease Control and Prevention (CDC), or state organization, such as the Wisconsin Department of Natural Resources (WDNR) or the Wisconsin Division of Public Health (WDPH) or an area organization like the Tainter/Menominee Lake Improvement Association (TMLIA), all agree that one way to maintain the continued vitality of waterways is to restore native vegetation along shorelines of lakes, rivers, and streams.

These restored natural vegetative areas are called buffer zones. Their purpose is to filter nutrients and other polluting sediments from entering our waterways. Buffer zones are best management practices that maintain water quality by controlling runoff and stabilize shore land from erosion.

Led by the education committee of the TMLIA, a shore land restoration project was recently completed at the Lamb's Creek Boat Landing/Park across the channel from Jake's Supper Club. The project was a collaborative effort between the TMLIA, Dunn County, UW-Stout students from Scott McGovern's biology classes and local businesses. The garden site was selected with approval of Dunn County personnel. The design was guided by Bob Colson, Dunn County

Planner. In addition to McGovern, education committee members who conceived the project were Dave Whiteley and Bill Olson.

The goal of the project is to demonstrate to shore land owners one of many ways to turn a shoreline turf area, which is prone to erosion and/or runoff, into a low maintenance buffer zone and rain garden. Shore land runoff is a common method by which nutrients such as phosphorous and nitrogen enters our waterways and contributes to the harmful blue-green algal blooms. Our lakes experience these toxic blooms during the summer recreational season.

Following site design, students and education committee volunteers removed sod and used it near the shoreline to build a berm. Berms function to reduce erosion and prevent runoff. Barley straw used in last summer's TMLIA experiment was removed from the lake this spring and next added to the garden as the first layer of mulch. A layer of mulched leaves and grass was placed on top of the barley straw. A variety of perennial plants and seeds were then added along the park and channel sides of the garden. The garden construction process was completed with a covering of wood chips. This type of garden construction is called "Lasagna" mulching.

Visitors to the park will be able to view the plants from either the park or channel sides of the garden as-well-as by strolling on a mulch path through the middle. In the fall, signs describing the plants and credits to the donors will be designed by Mr. McGovern's students and placed in the garden. The plants were donated as was the black dirt and grading. There are open areas for additional plants which will be added throughout the spring and summer. Another TMLIA shore land restoration project is being planned for a more natural area at the Northwest boat landing.

## **Notice of Proposed Amendments to the By-Laws**

The following ten amendments are proposed to the By-Laws of the Tainter/Menomin Lake Improvement Association, Inc. These proposals are the recommendations of the By-Laws Committee with members Robyn Morin and Ted Ludwig. The comments explain the reasoning for the changes. These amendments were approved by the Board of Directors at the May 12<sup>th</sup> meeting and are to be voted by the members at the Annual Meeting on July 14<sup>th</sup>. They will be voted on individually and, if approved, be effective immediately.

Proposed:

1.

Article I, Para. 2. Replace the word "nonstick" with "nonstock"

Comment: corrects spelling

2

Article III, Para. 1. Replace the sentence "Voting for directors at the annual meeting shall be by written ballot" with "Voting for directors at the annual meeting shall be by a show of hands except, if a position is contested, it shall be by written ballot."

Comment: This has been the practice in the past and simplifies the conduct of the annual meeting.

3.

Article IV, Para. 2. Replace the word "of" with "or".

Comment: corrects spelling

4.

Article VI, Para. 2 Delete the phrase "based upon their financial support" from the last sentence.

Comment: This is essentially meaningless. It was possibly included because the two government units provided some start-up funds to the Association. The participation of the two major government entities on the lakes is desired and to the Association's benefit.

5.

Article VI, Para. 4 Add the sentence "The term year shall be defined as from Annual Meeting to Annual Meeting."

Comment: The annual meeting can be held anytime within the third quarter of the calendar year. This change would make it clear that a board member's term continues following the end of the membership year until elections at the annual meeting.

6.

Article VI, Para. 6 Add the following sentence at the end of the paragraph: "If any Board vacancy occurs, the Board may appoint a member to fill the vacancy. This appointee shall serve the remaining term of the position to which he/she is appointed."

Comment: This has been the practice in the past but not clearly stated in the By-Laws.

7.

Article VI, Para. 7 Replace the word "directors" with the word "director".

Comment: Each case is considered separately.

8.

Article VI, Para. 7 Following the word "meetings", add the phrase "within any year of his/her term"

Comment: This would clarify when this paragraph can be used

9.

Article VI, Para. 10 Delete entire sentence and replace with "All Association funds shall be disbursed by the treasurer and countersigned by the president or in the absence of the president, the vice president."

Comment: This eliminates the requirement of bonding and its costs and puts in place a system that two individuals have to sign on all disbursements. This should ensure the disbursements are according to the Board's approval.

10.

Article VIII, Para. 6 Replace the phrase "officers of directors" with the phrase "office of director".

Comment: correctly describe the position

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### **About the Tainter/Menomine Lake Improvement Association**

The purposes and goals of the Lake Association are as follows: To support the protection and improvement of Lakes Menomine and Tainter for the general public and providing educational information on water quality and environmental issues affecting these bodies of water and their watersheds. In doing so, the association communicates and cooperates with conservation and environmental organizations whose goal is to do the same. As projects arise, the organization seeks funding from local, state and federal sources to accomplish the projects..

Tainter/Menomoin Lake Improvement Association, Inc.  
P.O. Box 185  
Menomonie, WI 54751

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<p><b>LAKE ASSOCIATION MEMBERSHIP APPLICATION</b></p> <p>Date: _____ , _____ , _____</p> <p>Name: _____</p> <p>Address: _____ _____</p> <p>Phone: _____ -- _____ -- _____</p> <p>New Member _____      Renewing Member _____</p> <p>Year-round resident _____      Summer resident _____</p> <p>\$15 Individual,    \$25 Family ,    &amp;    \$100 Business Membership year is from July 1 – June 30 Any memberships paid now are good to June 2010</p>	<p><i>It's Your Lake</i></p> <hr/> <p>Lake Association membership is an acknowledgement of our responsibility to our water resources. Please join us. If you would like to receive notices of the association meetings or other important water related issues via E-Mail, please include that address. This list will not be given or sold to any other entity.</p> <p>Email _____</p> <p>Web site: <a href="http://www.tmlia.org">http://www.tmlia.org</a></p> <p>Web Sponsor:    <b>Sitepro.com</b></p>
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