BALSAM, RED CEDAR, HEMLOCK, BASS \& MUD LAKES
Preserve and Protect for the Future.

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## PRESIDENT's LETTER

It seems like in the blink of an eye, another amazing summer has come and gone ... time to get ready for campfires and football season!! The summer was anything but "normal" for most of the country with wide spread droughts, fierce forest fires, stronger than expected hurricanes and lingering impacts from the pandemic. Notwithstanding all the craziness around us, our committees, along with volunteers, had another very active summer on numerous projects that I encourage you to can read about in this newsletter. I want to personally thank each and every one of the Board Members and volunteers, who continue to do what it takes to make our lakes the pride of northwestern WII.


After canceling the annual meeting in 2020 due to COVID-19 concerns, the RCLA Board was thrilled that we could meet in person at the LLBC's amazing new facility. I would like to take this opportunity to recap a couple important topics that I discussed during the meeting in July. You have heard me say this before, but it warrants repeating.

1. We need to continue to build our RCLA Budget Equity Position for anticipated AIS Emergency Response Plan expenditures. We have been fortunate not to have Eurasian milfoil or zebra mussels, but when it happens, we need to be ready to act quickly.
2. We need more volunteers, especially those committees like AIS / Clean Boats Clean Water, Shoreline and Island Restoration and Water Quality where we have grants that require us to maintain a certain level of volunteer hours. If we do not meet the required hours, the dollars come out of the RCLA pocket and reduces our equity position and ability to combat serious issues on our lakes if they arise. If you are interested in becoming a volunteer, please take the time to go out to our improved website at www. redcedarlakes.com and fill out a volunteer form or contact any of our committee chairs.

Many of us has taken for granted the excellent water quality of our lakes, the lack of serious AIS and the abundance of willdife, but those only exist because of the aggressive work of the
board, the volunteers on the committees, partnering with DNR for grants and a strong RCLA membership. The membership dues brochure will be coming out later this year and your continued support in keeping our watershed the best in WI is greatly appreciated. Board of Director Changes

At our RCLA Annual Meeting, the board and attending members recognized directors whose terms were expiring and decided not to renew for another 2-year term. Sue Sleik, Ryan Linder and Dan Ellefson decided not pursue another term leading our Membership, Communications \& Fish Habitat respectively. I would like to thank them for their commitment \& dedication to the RCLA over the past few years.

Also, the membership unanimously voted to accept the board's recommendation to renew Valerie Bausch to another 2-year term leading the Nature Committee, Michael Klutho leading the Shoreline \& Island Restoration Committee, Brent Heinlein as Co-Chair of the AIS Committee and Runae Maloney moving from chair of the Coupon Committee to leading the Membership Committee. The membership also unanimously approved the Board's recommendation to appoint the following committee chairs: Michelle Fischer-communications; Kathy Salvi-coupon book; Tim Plaza-fish habitat. Please see their respective committee articles to learn more about them.

I know I'm speaking on behalf of the Board and the entire RCLA membership when I say "welcome" and "thank you" for stepping forward to continue our rich history of volunteerism to an outstanding organization.

## Valerie Bausch, President

## Vice President's Letter

As many of you know, I am a member of the Red Cedar Watershed Water Quality Partnership committee, which was formed in 2015 and immediately developed a long-term plan entitled, "A River Runs Through Us: A Water Quality Strategy for the Land and Waters of the Red Cedar Watershed Basin".
$I$ represent RCLA and the northern part of watershed committee, which is made up of individuals representing WI DNR, UW-Extension, Barron, Sawyer, Rusk \& Dunn land and water conservation coordinators, municipalities, lake associations \& more. Our EPA and DNR approved \& funded plan's key strategy is to improve water quality in the entire watershed by reducing phosphorus loading by $67 \%$ by year 10 .

Our watershed is very diverse. The northern part is dominated by lakes, rivers, streams and forests, with some farm land. On the other hand, the middle and lower section is primarily farm land with some rivers, streams and lakes. Plus we have cities and municipalities contributing to phosphorus loading. This means that many of the various partners involved in the plan's implementation have to use diverse best management practices (BMD'S) to meet/exceed our goal.

## FARMING BMP'S

For instance, the farming community focuses on development and implementation of nutrient management plans to decrease phosphorus loading into lakes, rivers and streams, such as:

- Farmer-led councils that promote implementation of cover crops, no-till plowing and soil sampling to other farmers.
- Replication of known load-reduction tactics like vegetation buffers, grade stabilization structures, barnyard runoff systems and grassed waterways.
- Managed grazing for cows to graze in well-managed fields rather than near water
 bodies or in overgrazed areas.


## LAKES AND RIVERS

Although there is some overlap with the farming community on lakes and rivers, there are BMP's being implemented to address lake-specific phosphorus issues. such as:

- Aquatic Invasive Species (AIS) Management that includes control of phosphorus producing Curly Leaf Pondweed, much like RCLA has been doing for years.
- Shoreline and stream restoration projects like rain gardens, water diversions and buffer zones.
- Increased water quality testing on lakes and streams to better understand the key sources of phosphorus entering the water.


## CITIES, MUNICIPALITIES, VILLAGES

The watershed also includes several cities, municipalities and villages such as Birchwood, Rice Lake and Menomonie, which load phosphorus into the system. Some BMP's here include:

- Construction of regional storm-water ponds (Menominee built two that reduced loading by 39\% or 488 pounds annually).
- Implementation of new, improved street sweeping programs.
- Storm-water education and outreach programs.

While this represents some of the entities, projects and accomplishments in the watershed, it by no means is comprehensive. Many people in the watershed continue to change/ improve land and water management practices to decrease surface runoff and increase infiltration. Much of this work happens beyond the reach of the Partnership committee. That said, collectively, it is working. At the half-way mark, we are ahead of our goal and this provides the reason for optimism regarding water quality in the Red Cedar River watershed.

## Gerry Johnson, Vice President




## AQUATIC INVASIVE SPECIES (AIS) COMMITTEE

Summer seems to go by faster each year. We've enjoyed a beautiful and productive summer. Below is a brief description of what has been accomplished.

## Curly Leaf Pondweed:

In early May we completed our CLP pre-treatment surveys. These surveys provide us information on the amount of CLP we have actively growing in our lakes. This year we performed this survey twice. We did this as we were surprised at how little CLP was present in our lakes. The second survey came up with the same results as the first. This resulted in our having to treat only 2.5 acres for CLP this year.

To put this into perspective under our current grant the Wisconsin DNR has given us permission to treat up to 50 acres within


Balsam, Hemlock and Red Cedar Lakes. In 2019 we treated 27.93 acres, in 2020 we treated 16.74 acres and this year we
treated only 2.5 acres. This is great news for the overall health of our lakes.

CLD growth can vary dramatically each year but we hope our efforts will have a lasting effect.

In June Freshwater Scientific Services completed a CLP bed mapping survey. This survey provides GPS mapping of all the significant CLP beds that exist within Balsam, Hemlock and Red Cedar Lakes. We have received the preliminary results from this survey and they appear to confirm a significantly reduced amount of CLP in our lakes. The final study results will be provided to us later this fall.

Freshwater Scientific Services will be performing a CLP turion study this fall. Turions are the CLP seeds that fall off mature plants into the lake bed and form the basis for future plant growth. Turions can remain dormant in the lake bed for up to seven years.

The last turion study was performed in 2012 . The new study will provide updated information and help determine if the CLP management work completed these past several years has reduced the presence of CLP in our lakes. This is an important study as it will help us determine future lake management plans.

## Purple Loosestrife Monitoring:

As I am writing this article, we are actively working to eradicate purple loosestrife in and around our lakes. July and August are when this plant flowers and are most easily identified. The RCLA Nature Committee leads the effort to identify and eradicate purple loosestrife each summer.

This year and last year, due to COVID restrictions, we were not able to raise and release beetles to help control purple loosestrife. We are hoping we can restart this program next spring.
Over the years we've done a good job of controlling purple loosestrife on and near our lakes. However, purple loosestrife is a very persistent plant. This year we are finding a few areas in the lake where purple loosestrife has reestablished itself. This is particularly true in the bogs as you enter the channel from Red Cedar Lake going to


Hemlock Lake. We are taking steps to remove and chemically treat plants in this area. Purple loosestrife is very resilient so it will take several years of active management to hopefully eradicate the plant in this area of the lake.


## Shoreline Habitat Studies:

This fall we will be completing shoreline habitat and woody debris studies on Hemlock and Bass Lakes. These studies examine the health of our shoreline. The results of the study give us insight concerning whether water quality improvements can be achieved through better shoreline management.

These same studies were completed in the past two years for Red Cedar Lake, Balsam and Mud Lakes. If you are a lake shore owner on one of these lakes and are interested in the study results for your property, please contact Michael Klutho - Shoreline Restoration Board Chair.

## Ongoing Monitoring of AIS:

Throughout the summer we have been performing ongoing monitoring to determine if any new AIS is present on our lakes. This includes placing Zebra Mussel plates on all our lakes, monitoring them on an ongoing basis and throwing rakes to check for any new AIS plants.

I'm pleased to say that, to date, no new AIS species have been found in our lakes.

## Clean Boats Clean Water:

Red Cedar Lakes Association has paid for over four hundred hours of landing monitoring this summer. While monitoring our landings helps to ensure the boats entering and leaving the lakes that day are free of aquatic hitchhikers. It creates awareness and reminds people of what a wonderful resource our clean lakes are. We are always looking for paid volunteers to help with our Clean Boats Clean Water program. More information about being a Clean Boats Clean Water paid volunteer is available through the RCLA website.
A special thanks to all of you who used or encouraged someone to use one of our Landing Decontamination Stations this summer. We now have decontamination stations at three locations - Waldo Carlson Park, LLBC and Balsam Lake. We will be adding a fourth station this fall at Hemlock landing. Please encourage your families and friends who bring watercraft to our lakes to use the Decontamination Stations. It's another line of defense in keeping our lakes clean.

For additional information please contact Brett Heinlein at 4142540810.


## Conclusion:

As a reminder, many of the studies that have been performed on our lakes are available on the Red Cedar Lake Association website. The Red Cedar Lake Association Lake Management Plan is also available on the website. This report provides some great information concerning the historical management that has taken place as well as our vision for the future.

We continue to enjoy excellent water quality in
our lakes. We will continue to work hard to ensure this continues in future years. This work can't be completed without the help of volunteers. For all of you that have helped this year - Thank You! If you have an interest in getting involved, please let us know. We would love to have your help it's fun, educational and helps ensure the future quality of our lakes. Have a wonderful fall/winter!

## Tom Goodwin \&

## Brett Heinlein

## Nature Committer

Another amazing summer at the lake is in the books ... time to sit around the campfire and start enjoying fall! The Nature Committee elected to postpone the annual Nature Program in June due to COVID concerns, but we already have an amazing speaker lined up for Sat., June 4, 2022 at the Loch Lomond Beach Club. Steve Betchkal, who is an experienced birder, author of birding guides and leader of birding travel groups is lined up to share his knowledge of birds and dazzle us with his amazing bird photographs. If you have never had the opportunity to hear Steve speak, you will not want to miss his presentation. This is free family event with yummy refreshments!! Watch for details on the program in our spring 2022 newsletter.

The Nature Committee had plenty of summer activities. We continued our participation in the Loon Watch Program. This summer, we had 8 loon chicks make it this far, which is excellent considering we only had 4 chicks

in 2020. We have also observed several Bald Eagle juveniles and in August. Eagles from all over seemed to gather at night on Balsam Lake to roost ... one evening, I spotted 21 eagles ( 6 adults and 15 juveniles)! The Nature Committee was also responsible for monitoring and eradicating Purple Loosestrife (DLS) and many of you may have noticed an abundance of PLS on the bogs at

the southern end of Red Cedar. We pulled and treated some PLS and are working on a plan to further work on the bog next year. The wild rice that we normally map by the Balsam Lake boat landing was virtually non-existent this year, however, it is still important to take pictures of and map what we can for submission to the WI DNR, where they track the growth year over year.

The committee cannot emphasize enough the importance of taking the lead from your tackle boxes and making sure you do not leave any tackle in our lakes, minimizing the possible impact to our wildlife. We currently have a loon chick on Red Cedar with fishing line and a sinker dangling from their mouth. This chick still has to be fed by their adult, which will be migrating soon. We have called the wildlife rehabilitation organization, REGI, and their volunteers are attempting to capture the chick and remove the fishing line, but haven't been successful so far. The chances of survival if the loon continues to have this in their mouth is almost non-existent. Please, let's all do our part to ensure the wildlife on our beautiful lakes do not become another statistic.

## Our Island Needs Your Help!

The Northernmost island on Red Cedar Lake is owned by the County and open for all of us to use. Unfortunately wave action is eroding it away. So we need to shore it up with some rip rap and plantings. If you are able, RCLA is seeking donations to fund this island restoration project. We are seeking $\$ 10,000$. Any amount you can contribute helps! Please send your donation payable to RCLA to P.O. Box 214 Birchwood, WI 54817. Thanks!


Valerie Bausch

Autumn greetings to you! My name is Michelle Fischer; I'm the newly elected communication chair for RCLA. I am a high school special education teacher in Osseo, MN. However, I have a previous career background in graphic design and I'm excited to use this skill set again!

We have had the privilege of being guests at our friend's cabins over the past twelve years. During this time, we fell in love with the Red Cedar Lakes chain and this community. Last fall, we purchased our own slice of heaven on Hemlock lake.

As the summer comes to a close, the temperatures drop, and the leaves begin to turn, our time at the lake isn't over and I hope you plan on enjoying fall at the lake too. Fall is my favorite season with the breathtaking colors, apple picking, hayrides, crisp hikes in the woods, and the seasonal comfort foods we all look forward to devouring. Below you will find one of my favorite fall recipes. If you have a favorite fall or winter recipe you'd like to share with our members, please email me at rolacommunication@gmail.com and l'll post them on our website.

As the communication chair, my goal is to provide you an informative and engaging newsletter each spring and fall. RCLA also has an evolving website (https://www. redcedarlakes.com). Finally, we have a social media presence on our Facebook page: Red Cedar Lakes Association. Membership feedback is welcomed and encouraged. If you have a fun and creative idea for increasing membership engagement, please reach out to me.

## Fluffy Sweet Potato Pancakes

| $11 / 2$ cups | Krus |
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|  | \& W |
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| 1 | large |
| $1 / 2$ cup | ma |
| 1 Tbsp. | me |
| 1 cup | mil |
| 1 Tbsp. | app |
| 1 Tbsp. | pure |
| 1 tsp. | pure |

1. In large mixing bowl, combine pancake mix \& pumpkin pie spice....mix \& set aside
2. In medium mixing bowl combine egg, mashed sweet potato \& butter. Mix until smooth then add milk, apple cider vinegar, maple syrup \& vanilla. Whisk together
\& combine well.
3. Add wet ingredients to the bowl with dry ingredients - mix until combined.

Let batter set for 2 minutes before making pancakes. Batter thickens as it sits.
4. Heat griddle and cook pancakes according to directions on the box.
5. You may top the pancakes with butter, syrup \& crushed pecans.

## COUPON BOOK COMMITTEE

As the crisp cool days of fall approach, we begin to reminisce about what a wonderful summer it has been! The sounds of the loons echoing across the lake, the smell of the summer campfires \& BBQs, and laughter of people gathering again to enjoy each other's company .... these memories help to remind us about this beautiful natural resource we call home - or our home away from home.

By purchasing the Red Cedar Lake Association's annual coupon book, you join in the efforts to directly impact some of the healthiest and cleanest lakes in northern Wisconsin! Your contribution allows RCLA to continue to provide willife educational opportunities for all ages, regular water quality testing/maintenance, prevention of invasive species, shoreline restoration/maintenance and water safety training. This year the coupon fundraiser, contributed $\$ 7,400$, after expenses, to these efforts.

Merchants' coupons will be available from the surrounding areas of Mikana, Birchwood, Rice Lake, Haugen, Sarona, Hayward as well as Stone \& Shell \& Long Lakes.

The new 2022-2023 RCLA fundraising coupon book will be mailed to you in April 2022. Please remember to support the RCLA fund raiser, and send in your donation. The donation cost of the coupon book: RCLA members $\$ 25.00$ / non-member costs $\$ 30.00$.

Members, thank for your generous support this past year; as well as, our loyal businesses for their support in providing coupons for this fundraiser. I look forward to working with all of you during this upcoming winter and spring. Best wishes to everyone for the new year!

## Michelle

Fischer


## Fish Habitat COMMITTEE

I'm excited to be the new Fish Habitat Committee chair. I was born and raised on a dairy farm in Hawkins, WI My wife Sue and I live full time on Balsam Lake. I was President of Plaza Cranberry Firms, Inc. and grew cranberries for Ocean Spray for 43 years until my retirement in 2014. I am an avid fisherman and have been fishing the Red Cedar chain of lakes for 35 years. When the weather is too miserable to fish, you can find me in my woodworking shop or traveling. I am looking forward to improving the habitat on the lakes for everyone to enjoy.


Improving lake habitat with woody structure

The "Fish Sticks" project is intended to restore or enhance the woody habitat in lakes by adding trees to the shore area. This project is going to be the top priority for the fish habitat committee. Our plans are to meet with the Department of Natural Resources to get further direction and guidance on program implementation. We are planning on starting the process of tree placement this fall and into the winter months.

If anyone is interested in volunteering to assist with the program or getting a Fish Sticks project on your lake property, please contact me.


## LAKE INFORMATION AND SAFETY COMMITTEE

##  <br> MANAGE YOUR WAKE

BE A RESPONSIBLE WATER SPORT PARTICIPANT BY COMPLYING WITH THE WSIA (WATER SPORT INDUSTRY ASSOCIATION) GUIDANCE FOR WAKE BOAT OPERATORS.

- Maintain a minimum distance of $\mathbf{2 0 0}$ feet from any shoreline and others enjoying the lake. RED CEDAR LAKES ASSOCIATION RECOMMENDS 400 FEET.
- Minimize repetitive passes in the same area.
- Keep music at reasonable levels.

Remember: your wake has an impact on

- Property damage
- Shoreline erosion
- The lake bed and wildlife habitat
- The safety of others on the lake
- The transportation of AIS (Aquatic Invasive Species) in the ballast tanks and on trailers

Wisconsin Statute 30.66 (3) PROHIBITED OPERATION
(a) No person may operate a motorboat within 100 feet of any dock, raft, pier, or buoyed restricted area on any lake at a speed in excess of slow-no-wake.

1. No person may operate a motorboat at a speed in excess of slow-no-wake within 100 feet of the shoreline of any lake.

Wisconsin Statute 30.68 (2) \& (4) PROHIBITED OPERATION
(2) NEGLIGENT OPERATION. No person may operate or use any boat, or manipulate any water skis, aquaplane or similar device upon the waters of this state in a careless, negligent or reckless manner so as to endanger that person's life, property or person, or the life, property or person of another.
(4) CREATING HAZARDOUS WAKE OR WASH
(a) No person shall operate a motorboat so as to approach or pass another boat in such a manner as to create a hazardous wake or wash.
(b) An operator of a motorboat is liable for any damage caused to the person or property of another by the wake or wash from such motorboat unless the negligence of such other person was the primary cause of the damage.

If you witness boats violating distance laws call the Sheriff's Department: On Red Cedar and Hemlock 715-537.3106
On Balsam Lake 715.468.4720
or Wisconsin DNR Enforcement 1-800-847.9367

Take the test. Go to WSIA.NET/WAKE-RESPONSIBLY
for more information on how you can keep our lakes safe and your sport friendly.


RCLA is NOT responsible for enforcement of boat or lake violations. Please call the sheriff or the Wisconsin DNR when you
have a concern or witness violations.
Len Christianson

## MEMBERSHIP COMMITTEE

As I write this, tomorrow will be September 1 - hard to believe we are writing articles for the RCLA Fall newsletter already - it seems I just did this for the Spring Newsletter - albeit for a different committee.

Where are we at? Sue has moved to her new home, I am in the process of learning to be 'Sue'; and let me tell you, this is not an easy 'act to follow'. I am going to give it my best, and with Sue's continued support, I believe I will make it. 2021 was an excellent year. We currently have 660 members in 399 households. This is a slight increase over 2020. It is exciting to see our membership continue to grow - a great indicator of your commitment to the work of the RCLA. In addition to the Membership dues, our members contributed an additional $\$ \mid 0,171$ in designated donations and, in July, we received an anonymous unrestricted donation of $\$ 2,500$. The Board thanks all our members for their generous support.

I also want to recognize and thank our 10 Corporate Members: Birchwood Café, Cedar Lake Grill, Cedar Ridge Wealth Management, Cheers Bar \& Grill, Dairy State Bank, The Gathering Place, Loch Lomond Beach Club, Mikana Marine \& Resort, Dines at the Lake, and Thomas Marine. We are grateful for their commitment to us and look forward to supporting them, as we move into the fall and winter seasons.

If you have new neighbors - or old neighbors - who are not members, please talk to them about the RCLA and encourage them to become members. Membership forms are available on the website using the 'Become a Member' option in the upper right-hand corner of the home page. In November, I will be mailing out the 2022 membership forms to all current members. I sincerely hope you see value in being a member and will renew your membership. As you read the fall newsletter articles, it is easy to see why the RCLA is recognized as being the most active lake association in the surrounding area. This cannot happen without funding and support from each and every one of you.

Thanks for all you do!! Take care and have a safe and healthy fall and winter.

## Runae Maloney

## CORPORATE MEMBERS



Birchwood Café
120 Main Street
Birchwood, WI 54817
(715) 354-3000

Serving Breakfast \& Lunch
Cedar Lake Grill
2670 27th Street
Mikana, WI 54857
(715) 254-9951

Cedar Ridge Wealth Management Group, LTD
8530 Eagle Point Blvd., Suite 250
Lake Elmo, MN 55042
(651) 200-4144
https://www.cedarridgewealth.com/

Cheers Bar \& Grill
2855 29th Ave.
Birchwood, WI 54817
(715) 354-3505

Dairy State Bank
124 S Main Street
Birchwood, WI 54817
(715) 354-3411
https://dairystatebank.com/
The Gathering Place
273827 1/2 Avenue
Birchwood, WI 54817
(715) 354-3029
https://gatheringplaceresort.com/
Loch Lomond Beach Club 2754 28th Street
Birchwood, WI 54817
(715) 354-3400
https://www.llbeachclub.com/

Mikana Marine \& Resort
271826 1/2 Avenue
Rice Lake, WI 54868
(715) 234-3008
http://www.mikanamarineresort.
com/home
Pines at the Lake
2801 27th Street
Birchwood, WI 54817
(612) 875-8014
https://pinesatthelake.com/

## Thomas Marine

122 E Elm Street
Birchwood, WI 54817
(715) 354-7070
https://www.thomasmarinewis.com/

## SHORELINE \& ISLAND RESTORATION COMMITTEE

## "Impervious" Can Be As Bad To Our Lakes As The Name Sounds.

The shoreline areas surrounding our lakes directly contribute to the quality of our lakes. How shoreline property is maintained and managed therefore is very important. Runoff from our shoreline properties, when managed well, serves to not only maintain and enhance lake habitat, biological diversity, fishing and the general enjoyment that comes with clear waters, it also helps maintain the value of our lakeshore property. Clearer lakes mean higher property values. Managing water runoff well is a win-win for our lakes and for surrounding property owners.

Studies have shown that water quality declines as the percentage of "impervious" cover on the surrounding shorelines increases. So what is "impervious?"

Impervious is the term used to describe artificial materials that prevent water from seeping into the ground when it rains. Instead, impervious materials create excess and direct runoff into lakes. This in turn increases pollutant loads in lakes and degrades lakeside habitat (areas that typically serve as spawning areas for fish), as well as causing a decrease in the visibility in the lake itself. Aquatic plants typically are in the shallower shoreline areas of our lakes. Fish (and the critters fish eat) need this plant life for shelter to allow them to grow into the fish we will catch in a couple of years. Direct runoff smothers and degrades these areas.

So, what can we do? We can take an inventory of our lakeshore property. Does it have a cabin, lake home or other structure? Is there a driveway? Are there walkways? Are the driveway and walkways paved? Once you've got your inventory completed, consider possible changes that would help mitigate excess runoff into our lakes.

For example, directing runoff from your roof into a rock infiltration area will help reduce the impact of the impervious nature of any roof and instead allow it to soak into the ground. Here is a link outlining how to install rock infiltration projects. https://health-ylakeswi.com/best-practices/\#rock


You can also consider diverting runoff into an area on your property that naturally allows water to temporarily pool and soak into the ground rather than run directly into the lake. Diverting water to a natural area already on your property can be the most cost-effective means to control runoff. Here is a link to guide you through a diversion project. https://healthylakeswi.com/ best-practices/\#diversion


The goal is to capture runoff from impervious surfaces, redirect it and otherwise allow it to soak into the ground. This is true whether the impervious area is a roof or a paved surface such as a driveway. And better yet, when considering a new driveway or path, take a look at "previous" methods of "paving" the area. That is, materials that allow the water to soak in beneath the driveway or path thereby decreasing the amount of runoff at the source.

Additionally, always consider integrating native plantings along the shoreline itself as well as constructing rain gardens. Here are links to information about installing native plantings and rain gardens. https://health-ylakeswi.com/best-practices/\#350 (native plantings) https://healthylakeswi.com/ best-practices/\#rain (rain gardens).

Both are also very effective in helping manage/control the runoff that happens on all lakeshore property. And all of these measures to manage and control runoff allow us to jointly contribute to maintaining and improving water quality and our enjoyment of our lakes. Being a good steward of our lakes and lakeshores aligns perfectly with the RCLA Mission Statement - "To preserve, protect and improve Red Cedar, Balsam, Hemlock, Bass and Mud Lakes and their watershed and ecosystem."

## Michael Klutho



This illustration shows all five Healthy Lakes \& Rivers practices together at one property: fish sticks, native plantings, diversion, rock infiltration, and a rain garden.

## WATER QUALITY COMMITTEE

## Please Don't "P" in the Lakes!

Just to be clear, I mean " $D$ " as in the chemical symbol for phosphorus, not what you might have otherwise thought. That adds $N$, or nitrogen, to the water. Phosphorus is an important nutrient generally in short supply, so when it gets added to our lakes, it can increase algae growth, the green, often fibrous stuff we hate to see in our lakes.
One pound of phosphorus can contribute to the growth of 500 pounds of algae!
Don't like the green gunk in our summer water? Simply don't P in the water! Read on to find out how to avoid that. Want to know how our lakes compare to others? Got that covered here, too. Want some hardcore numbers? If you know me, you know I have those, too. But I also put warning labels around those couple of paragraphs. Want to know that you should do to reduce $P$ and pea-green water? - And you certainly want to help don't you? You can, quite easily. You do make a difference. The how-to stuff is in the last couple of paragraphs. If you want to cut to the chase, you can go there now but you'll miss the good stuff. Something for everyone, I hope.

For the last three years, a team of area volunteers has been measuring how much dissolved phosphorus comes into our lakes system, and from where. We also measured concentrations of phosphorus to see if the lakes and streams exceeded state guidelines. We sampled 10 sites, each once a month from April through October, over the last three years. We collected water, measured stream flow, and profiled stream depth and width. Our work was supported through two Department of Natural Resources water quality grants and our consultants at LEAPS.

We measured water coming into our Red Cedar Lakes Association waters from the
upstream lakes like Birch, several places each on streams like Hemlock, Pigeon, and Sucker, and outputs down the Red Cedar River on its way to Rice Lake. What did we find? Ahh, data. Numbers. That is your first numbers warning.

While I will give you pounds of phosphorous
rising, and the streams feeding the lakes exceeded state maximums many times.

Want to skip the numbers that follow? If so, I'll say here our streams are dumping tons of Pinto our lakes, and we are messing up the lakes ourselves, too. If you don't want the quantitative details, you have my blessings

per year on some key input locations to our lakes, you should know that P is measured in minute quantities in water samples, micrograms per liter. One microgram of P in a liter of water is the same as 0.0000001 ounces of P in a gallon of water, or one part P per billion parts H 2 O . That would be roughly equivalent to 1 second in 32 years. So we are talking really, really, tiny amounts of $P$ in any gallon of water. But tiny amounts add up when there are rivers moving hundreds of cubic feet of water per second over the course of a year.

> Our findings continue to show we have some of the lowest "p" levels for lakes in the state.

That's the good news. Unfortunately, the levels of phosphorus in the lakes have been
to skip down 4 or 5 paragraphs. My hope is you'll at least take a peek at what we found. Sucker Creek exceeded state maximums for phosphorus concentrations 4 times in our samples. Hemlock Creek exceeded state maximums 7 times, including the highest phosphorus readings of our entire study. Digeon Creek exceeded state maximums 13 times in the three years. Again, these are concentrations, or parts per billion in a given water sample.

Let's take a look at total amounts of phosphorus. That is what you get when you calculate concentrations that vary over the year, multiplied by the flow of water, which varies over the year. High water amounts tend to have high phosphorus concentrations. That means the floodwaters are not diluting phosphorus,
they are carrying extra phosphorus from the land into the streams. Here we will look at pounds of P per year at various points.

The single largest outside source of P in our water comes from the stream that feeds into Balsam Lake, or where it leaves Birch Lake. About 2400 pounds per year. Next is Hemlock Creek with an average 2100 pounds per year. A ton is 2000 pounds, so each is dumping over a ton of P into our lakes each year. Digeon Creek also puts a ton of P into the lakes each year. Sucker Creek adds another half-ton per year, 1200 pounds. In case you are not keeping track, that is 7700 pounds of P into the lakes each year. The Red Cedar River carries 2100 pounds away each year. What happens to the rest? It stays in the lakes where some of settles to the bottom, but the rest contributes to plant growth, including algae.

Where is all that P coming from? Nationally non-point sources such as farm runoff or storm water from towns are the largest contributors. That would explain what we found in Sucker and some of the P in $\mathrm{D}_{\mathrm{i}}$ geon Creek. However, Hemlock Creek and much of Pigeon Creek do not drain much farmland and each had levels similar to the other two major contributors that had farms and towns in their drainage basin. Decaying plants upstream in Hemlock apparently contribute as much as other runoff.

Other phosphorus comes from us. Runoff from our lawns, seepage from our septic systems, and attached to soil eroding from our shores.

There has been a lot of research on what levels of phosphorus are too much for lakes such as ours. Most of the time our lakes are below that level of concern. A few times each year our lakes exceeded the level of concern, which adversely affects fish and promotes algae. The long-term trend in our lakes is towards higher levels of phosphorus concentrations.

What does this all mean? For now, we still
have very clean lakes. But we are pushing the limits, and if we want to keep these lakes clean and with limited algae, we need to act now. Prevention is easier and cheaper than cleanup.

Want better fishing, better swimming, cleaner boats? Limit P in the lakes. In addition, estimates are that property values are as much as $\$ 200$ higher per foot of shoreline on clean lakes over green algae-filled waters. Or put another way, our clean lakes add $\$ 20,000$ value for each 100 feet of shoreline you own, if you are on the water. Clean lakes make for better swimming, boating, and fishing for all of us.

By now you are hopefully asking "So what can I do?" Collectively, we are using these and other data to make a new ten-year plan for our lakes. That is why the DNR gave us the grant money. Managing phosphorus will

be a primary objective of the plan. Measuring P will no doubt be part of the equation. You can volunteer your time to water monitoring or other lake quality projects, especially ones that keep phosphorus out of the water. You can read and comment on draft plans. But you can do better than that.

First, don't let your phosphorus get into our water: Use phosphorus-free cleaning products and fertilizers. You have to read the
labels. I know that is not as much fun as a summer paperback, but it matters. So again, read the labels! Also, you, uh, pass a lot of phosphorus through your body and into your septic tank. It's in your food. Keep that septic system maintained, per state guidelines - I bet you need to schedule a pumping soon.

Since phosphorus bonds to soil particles, keeping land on land and out of the water matters a lot. You can do that by planting native plants on your shorelines to keep soil and surface water runoff from reaching the lakes. RCLA and the state Department of Natural Resources can help you do that through our shoreline grants initiatives. Note that short, mowed grass does not hold on to soil as well as native plantings and shrubs. Decrease your phosphorus contributions by putting in a shelter strip of unmowed plants along the shore.

You can also help keep native plants along the shore and keeping soil particles out of the lakes by slowing down while you are boating. Water-use rules llaws actually, not suggestions: Wisconsin Statue 03.66 (3) for those checking up on this) say you need to operate with no-wake within 100 feet of shore, dock, raft, pier or restricted-speed buoy. That means all channels and near shore are no-wake zones. That starts 100 feet in front of the marker buoy, not next to the marker. Shorelines are very susceptible to erosion. Your wake erodes the shoreline, sending soil, plants, and their phosphorus into our lakes. So you can make a difference!

## Fight "p" by slowing down when near any shoreline!

So please, don't P in the lakes. Boat slowly near shore. Plant native plants along shorelines and don't clear all the way down to the lake. Keep your septic functioning well. Together we can keep our lake water the best in the state.

## Tim Lewis

BALSAM, RED CEDAR, HEMLOCK, BASS \& MUD LAKES
Preserve and Protect for the Future.
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