

# THE LAKE GUARDIAN

SPRING 2021

PHOTO CREDIT: JOHN DOSKOCH

## Conserving Our Land Protects Our Lake

Anne Fleming & Tom Darnton



YOU'VE SEEN THOSE BUFF-COLORED OR DARK GREEN WEATHERPROOF SIGNS ALONG THE ROAD. THE ONES WITH THE LAKE, LAND, AND LONE EVERGREEN TREE ON THEIR OVAL LOGO. EACH NAME IS UNIQUE, BUT THEY ALL END WITH THE WORDS PRESERVE OR RESERVE.

You may be familiar with those signs scattered along or near Lake Charlevoix such

### WHAT IS A CONSERVATION EASEMENT?

Conservation easements are landowner-initiated agreements designed to limit the amount or type of development on their property in perpetuity. Private ownership is retained while restricting future use of the land. Easements can apply to an entire parcel, part of the property, or a zone of exclusion within the property.

Conservation easements are good for the watershed because they help maintain water quality, perpetuate and foster healthy forests, protect scenic vistas, and ensure that the land is managed for sustainable use.



PHOTO CREDIT: JULIE STRATTON

as the Sleepy Hollow Nature Preserve, the Oyster Bay Nature Preserve, or the Taylor/Olstrom preserve complex. These properties are owned and managed by the Little Traverse Conservancy, a nearly 50-year-old land trust that includes the Lake Charlevoix Watershed among its priorities for protection.

In addition to protecting land as a nature preserve, a number of properties on or near the lake are protected with a guardianship

*Continued on page 7...*



## President's Corner



An unusual element of writing The President's Letter is writing to the future. Following a Monday morning nudge from our highly competent and friendly

editor, with a view of remaining ice in the bay through the early morning sun, I asked myself what message I would like mid-May to receive from today. **There is hope and we have much to learn.**

We are sharing two transformational experiences: pandemic and high water. On both fronts there is hope. By the time these words are read, many will have been vaccinated. As I write, the lake level has receded dramatically, revealing the rocks my sister-in-law placed by hand to protect the big white pine that anchors our lake frontage. I know the lake will be rising again by mid-May, but I can be hopeful that we're now in a downward part of the cycle.

Learning is the unspoken part of our mission. To properly protect the lake and promote best practices, we must first learn what those practices are. To that end, we plan to resume our research efforts, engage with other stakeholders, evaluate options,

and propose solutions designed for the problems facing our lake. We will share that learning within our community and with our neighbors.

I also hope we can be in each other's company again this summer. Our Poker Run is scheduled for August 20th. We will have an annual meeting, later in the summer than usual, and probably outdoors. We'll be able to gather together with friends and neighbors in ways we'll perhaps appreciate more. Most important, we'll be able to resume our interrupted work to care for our lake to the best of our ability.

*Tom Darnton,  
LCA President*



### It's time to renew your annual membership to the Lake Charlevoix Association.

The Lake Charlevoix Association plays an important role in keeping our beautiful lake one of the healthiest in North America. Our efforts include research, education, advocacy, and collaborating with other environmental organizations—all aimed at protecting Lake Charlevoix for future generations to enjoy.

Please use the enclosed envelope or go to <https://www.lakecharlevoix.org/support-us.html> to renew or increase your annual support. You will be providing critical funding for our 2021-22 activities.

*Thank you for your ongoing support!*

### Mission:

*Protect the natural quality and beauty of Lake Charlevoix.  
Promote understanding and support for safe and shared lake use.  
Advocate sensible and sustainable practices for lake use and development.*

### LCA Board of Trustees

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[www.lakecharlevoix.org](http://www.lakecharlevoix.org)  
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# Help in Times of High Water

Joel Van Roekel

**CLOSE YOUR EYES FOR A MINUTE AND CONJURE UP AN IMAGE OF LAKE CHARLEVOIX. WHAT COMES TO MIND? ACRES OF SCENIC BLUE WATER? COTTAGES PROVIDING SHELTER AND RESPITE? SPOTS WHERE FAMILY AND FRIENDS MAKE LONG-LASTING MEMORIES? ... A SHORELINE DECIMATED BY POWERFUL WAVES? 2020 WAS THE YEAR OF HIGH WATER, RECORD LEVELS THAT FORCED LAKE CHARLEVOIX PROPERTY OWNERS TO DEAL WITH SUBMERGED DOCKS, VANISHING BEACHES, AND SHORELINE EROSION NOT SEEN FOR MORE THAN THREE DECADES.**

The glacial origin of our 60-mile shoreline means there is a lot of variation in the materials that make up the water's edge. Some properties are gently sloped with sandy beaches, while others have rocky shorelines reminiscent of crumbling stone walls, and hundreds of frontages are lined with woody vegetation and tall trees. Some owners could simply watch the water rise and wait for it to recede. Others, because of their location on the lake, the

composition of the waterfront, and the force of natural and boat driven waves needed to act. But what to do?

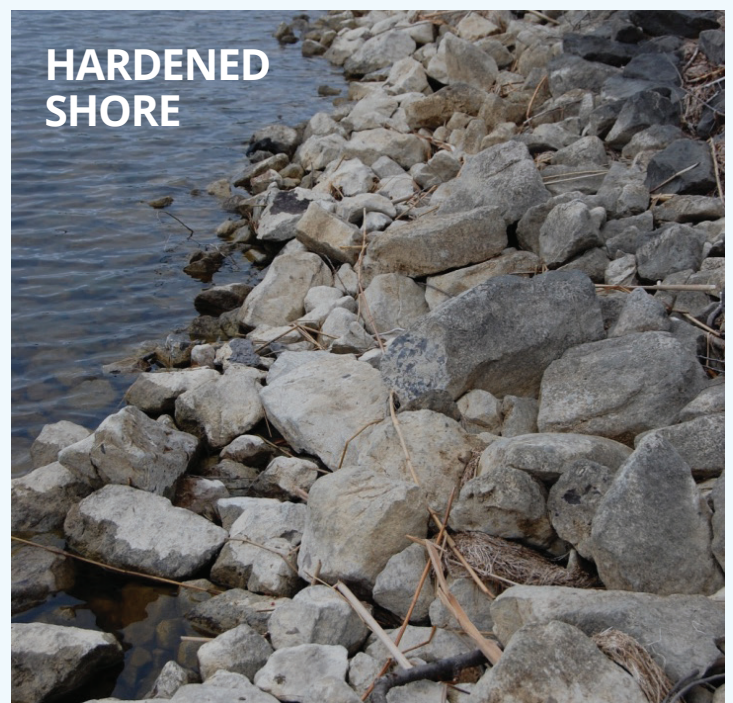
On paper, there are lots of options to “managing” a shoreline. A 2021 report from the Great Lakes Research Center, lists more than 40 distinct “shoreline adaptation strategies” available to property owners and lakefront communities. However, many are cost prohibitive, some have the potential to cause more harm than good, and others are not robust enough to withstand the waves of our high energy lake.

The good news is that there are credible resources available to help lakefront owners make choices that are both lake friendly and effective. The Tip of the Mitt Watershed Council has been advocating and educating for healthy lakes, streams, and wetlands since 1979. Their website ([www.watershedcouncil.org](http://www.watershedcouncil.org)) contains a wealth of information on all things water. Of particular note is a publication titled *“Understanding, Living With, and Controlling Shoreline Erosion 3rd edition.”* This 100 plus page document contains the fundamental concepts of shoreline erosion,

information on assessing your particular situation, a description of a variety of control methods that have stood the test of time, and a step-by-step guide for planning and implementing erosion control on your property.

The Michigan Natural Shoreline Partnership ([www.mishorelinepartnership.org](http://www.mishorelinepartnership.org)) is a collaboration of state agencies, academia, non-profits and private industry. Their goals are to help in the restoration of the ecology of shorelines, stabilize shoreline erosion, and provide attractive options to lakefront property owners. They train contractors and landscapers about shoreline technologies, educate property owners about the importance of natural shorelines, and research and develop natural shoreline technologies. The website contains a list of Certified Natural Shoreline Professionals in our Charlevoix/Petoskey area.

Shorelines are complicated places. they have been described as “areas of unending conflict between the land and the natural forces of wind, waves, gravity and currents.” If we learn nature’s rules on how they work, both the land and the lake win.





# Dear Lake Charlevoix Association Members,

Many of you may have heard of the CAKE CISMA, the Charlevoix, Antrim, Kalkaska, Emmet Collaborative Invasive Species Management Area, from our work treating invasive phragmites. The CAKE CISMA exists to protect the natural resources, human health, and economy of Northern Michigan through collaborative management of invasive plants. We do this through community education and engagement as well as field management of invasive plants.

Invasive plant management is important for watershed health. On and around Lake Charlevoix, there are several unwanted species that might be lurking on your property! The following species present threats to our natural communities and their ecological function:

## BLACK SWALLOW-WORT (*Vincetoxicum nigrum*)

This plant spreads quickly with wind dispersed seeds. It can cover and crowd out all native plants reducing light and nutrient availability. This has only been found in our region around the Petoskey area and is therefore a top priority for treatment and management.

### SWALLOW-WORT



## PHRAGMITES (*Phragmites australis*)

Phragmites is a reed grass that overruns native plants in natural areas. This reduces critical food resources for birds, butterflies, and other wild creatures. Invasive phragmites can “clog” wetlands; it’s numerous stems and rhizomes even filling in small waterways.

## PURPLE LOOSESTRIFE (*Lythrum salicaria*)

Purple loosestrife grows faster than almost any wetland plant. It produces seeds that germinate very rapidly and can out-compete native species. Its presence accelerates sedimentation and silt deposits which can dry up shallow water habitats.

## KNOTWEEDS (*Reynoutria japonica*; *sachalinensis*; *x bohemica*)

Invasive knotweeds out-compete native plants and provide little food or other habitat for wildlife. Knotweed can sprout up through concrete and asphalt, spread quickly, and is difficult to eradicate. It is a prohibited plant species in Michigan.

## ASIATIC BITTERSWEET (*Celastrus orbiculatus*)

Bittersweet vines tend to strangle and replace native vegetation. Ecosystems dominated by oriental bittersweet alone can no longer provide critical food resources for wild creatures.

### PHRAGMITES



## GLOSSY BUCKTHORN (*Rhamnus cathartica*)

Glossy buckthorn can replace entire wetland plant communities producing chemicals that are toxic to frogs and salamanders. Common buckthorn grows aggressively in areas with drier soils. Both plants reduce the diversity of birds, butterflies, and other wild creatures where they take over.

CAKE CISMA offers help with preventing and managing invasive species. We operate with grants from local, state, and federal agencies. These fund projects including cost-share treatments to manage high risk species that threaten our area and survey objectives to detect new invasive species before they become a threat. We offer consultation on managing invasive species and preserving your ecosystem and its wildlife. In the summer of 2021 we will be offering free treatment of many of the above species under grants and funding from local partners. For more information contact us at [CakeCisma.org](http://CakeCisma.org) or at 231-533-8363 ext. 5.

*Kirk Acharya*  
Program Coordinator, CAKE CISMA

### PURPLE LOOSESTRIFE





# A Fresh Season

By Peggy Smith

**THE LAKE CHARLEVOIX ASSOCIATION MEMBERSHIP COMMITTEE RECENTLY SENT A POSTCARD DEPICTING A BIRD'S EYE VIEW OF LAKE CHARLEVOIX'S HOLY ISLAND, AT REST UNDER A BLANKET OF SNOW. THAT GOT US THINKING ABOUT EACH OF YOU, WHETHER RIPARIAN OR WATERSHED STAKE HOLDERS, SNUG IN YOUR HOMES AND ANXIOUSLY AWAITING THE NEW SUMMER SEASON. AS WE RETURN TO OUR PLACE OF SOLACE, RECREATION, AND RESTORATION, WE ARE REMINDED THAT IT NEEDS OUR CARE, ADVOCACY, AND BEST MANAGEMENT PRACTICES, NOW MORE THAN EVER.**

Now is a perfect opportunity to devote some time to learning and preparing for our return. Our newsletter and website are great resources available to you. They provide quick access to township maps and ordinances, greenbelt vegetation requirements, and a variety of ways to manage septic responsibilities and water runoff going into the lake. Each of our articles generally mention websites that are topic specific.

To guide our readers to sites that stress best management practices, here are several worthy of mention. Check out these resources on this page and implement what you can on your shoreline or watershed property. Your advocacy and actions demonstrate your sincerity in not only protecting our water quality today but

helping to ensure the legacy it will provide for others in the future. If you find a site that is of help, please like and share them with your neighbors, friends, associations, etc. We would love your feedback about them, as well as useful resources you have found to be especially helpful.

Heading into the 2021 season of enjoying Lake Charlevoix, please recognize that we are a bountiful collective resource of best management practices. At the same time, we also are looking to both bond as a network of people who advocate for our lake, and build bridges with our surrounding communities, municipalities, and all members of LCA. Here's to a Fresh Season in the amazing community of Lake Charlevoix Association members.

## RESOURCES

<b>CHARLEVOIX COUNTY CONSERVATION DISTRICT</b>	<a href="https://www.charlevoixcounty.org/conservation_district/index.php">https://www.charlevoixcounty.org/conservation_district/index.php</a>
<b>CONSERVATION RESOURCE ALLIANCE</b>	<a href="https://www.rivercare.org/">https://www.rivercare.org/</a>
<b>FRIENDS OF THE BOYNE RIVER</b>	<a href="https://boynriver.org/">https://boynriver.org/</a>
<b>FRIENDS OF THE JORDAN RIVER WATERSHED</b>	<a href="https://friendsofthejordan.org/">https://friendsofthejordan.org/</a>
<b>LAKE CHARLEVOIX ASSOCIATION</b>	<a href="https://www.lakecharlevoix.org/">https://www.lakecharlevoix.org/</a>
<b>MINVASIVES</b>	<a href="https://www.michiganinvasives.org/">https://www.michiganinvasives.org/</a>
<b>MICHIGAN LAKES &amp; STREAMS ASSOCIATION</b>	<a href="https://mymlsa.org/">https://mymlsa.org/</a>
<b>MICHIGAN NATURAL SHORELINE PARTNERSHIP</b>	<a href="https://www.mishorelinepartnership.org/">https://www.mishorelinepartnership.org/</a>
<b>SEA GRANT MICHIGAN</b>	<a href="https://www.miseagrant.com/default.asp">https://www.miseagrant.com/default.asp</a>
<b>TIP OF THE MITT WATERSHED COUNCIL</b>	<a href="https://www.watershedcouncil.org/">https://www.watershedcouncil.org/</a>



# The Causes and Impacts of Failing Septic Systems

John Hoffman

**MANY HOMES ON OR NEAR THE LAKE USE A SEPTIC SYSTEM TO TREAT WASTEWATER. THESE DWELLINGS ALMOST ALWAYS OBTAIN THEIR DRINKING WATER FROM A WELL EXTENDING INTO THE GROUNDWATER ZONE BELOW (SEE DIAGRAM). A PROPERLY FUNCTIONING DRAIN FIELD TREATS THE WASTEWATER FROM THE SEPTIC TANK SO THAT ONLY PURIFIED WASTEWATER WILL REACH THE GROUNDWATER LAYER.**

One of the problems with aging septic systems is leakage. A leaking septic system will discharge domestic wastewater directly into the ground where it can flow to the groundwater zone and contaminate the household drinking water supply. Untreated wastewater will also contaminate recreational lakes, streams and rivers, that share the watershed with the failing septic system.

What can cause a septic system to leak? It could be a crushed inlet or outlet pipe causing a gap where the pipe connects to the tank. Steel tanks can rust or corrode. Concrete tanks can crack due to gas pressure inside, improper installation or a vehicle compacting the soil above it. Tree roots can enter the tank through even a very small hole or gap around the tank lid, and as the tree thrives on the nutrients in the tank the roots will widen the opening.

Leaks are not the only problem. Running excessive water through a septic system or permitting runoff from roofs, driveways and sidewalks to reach the drain field may cause the soil in the field to become saturated. This may result in wastewater rising to the surface or even backing up into the house.

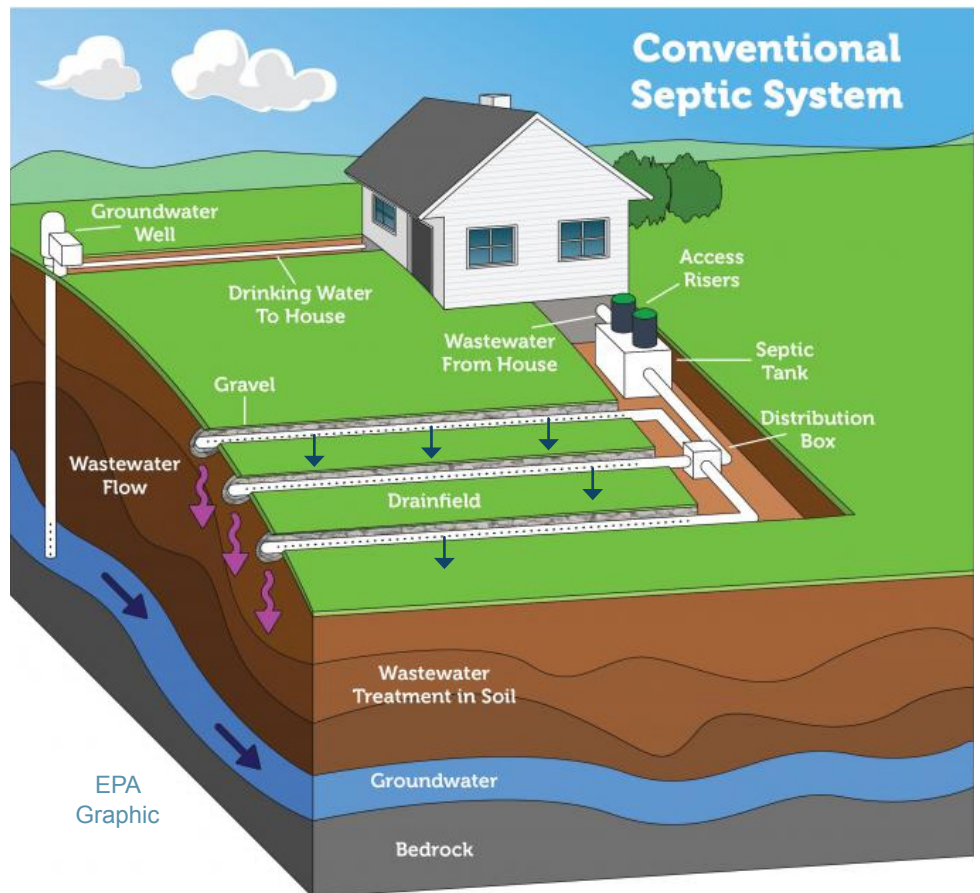
Signs of a failing septic system include unpleasant odors, soggy soil anywhere near the system, including the drain field, visible wastewater on the surface, and excessive growth of weeds and algae on the shoreline.

The seriousness of failing septic systems cannot be overemphasized. The harmful bacteria, parasites and viruses as well various types of fungi that are present in untreated wastewater can cause a variety of diseases. If contaminated well water is consumed or one swims in lake water polluted by contaminated surface water run-off, they run the risk of contact with bacteria, viruses and parasites.

**BACTERIA** - typhoid fever, dysentery, gastroenteritis, cholera

**VIRUSES** - hepatitis, viral gastroenteritis

**PARASITES** - protozoans and the eggs of parasitic worms are often present in untreated wastewater and can cause abdominal pain, diarrhea, nausea and vomiting.



Please note: Septic systems vary. Diagram is not to scale.

## IF YOU SUSPECT THAT YOUR SEPTIC SYSTEM IS FAILING...

promptly call the Health Department of Northwest Michigan (231) 547-6523 for advice and referrals to septic system professionals.

# “OHWM!” “ATHWM!”

Joe Kimmell



*These may look like expletives in one of your text conversations, but they stand for water level concepts important in any shoreline restoration or improvement project on Lake Charlevoix. Water levels on our lake rise and fall with the Lake Michigan-Huron levels, and these, along with the other Great Lakes and St. Lawrence River system, are monitored and governed by the U.S.-Canada International Joint Commission, (IJC).*

In order to regulate the shared systems, the IJC measures water levels against established “ordinary” high water marks, established in 1985-the International Great Lakes Datum- and reviewed regularly. These marks include the Ordinary High-Water Mark, (OHWM), and the All-Time High-Water Mark (ATHWM) established for each lake. These are measured in meters or feet above a zero base, set at Rimouski, Quebec on the St. Lawrence.

State and local jurisdictions often define the shorelines subject to their regulatory jurisdiction by these numbers, and compliance with these regulations will be necessary when planning any restoration or improvement projects on Lake Charlevoix or Lake Michigan. This includes shorelines, lake bottom or projects within a designated “greenbelt” area. Possible regulation can involve the Army Corps of Engineers, the State of Michigan (EGLE) or one of the 7 townships or 3 cities around our lake.

Locating the OHWM/ATHWM on your lakeshore will be necessary to determine what permits or permissions you will need to obtain. Further information can be found on the township, city or EGLE websites. For reference, the 1985 OHWM for the Great Lakes are set forth below.

Lake Michigan-Huron-Lake Charlevoix.....	176.0 meters (581.5 feet)
Lake Superior.....	183.2 meters (602.6 feet)
Lake Erie.....	174.4 meters (572.2 feet)
Lake Ontario.....	74.2 meters (243 feet)

## Conserving Our Land Protects Our Lake

*Continued from page 1*

tool known as a conservation easement. This is a designation that allows the land to remain in private ownership, **does not allow public access to the land**, and that stays with the land no matter who owns it in the future. A positive point about conservation easements is that they are all unique to the needs and wants of each individual owner.

The motivation behind placing a conservation easement on your property should be the desire to protect the land for all time. While not all lands will qualify for a conservation easement, those that protect the watershed and/or shoreline and are of a meaningful size can often qualify.

“When you own a piece of land, there are numerous things you can do on that land,” said Caitlin Donnelly, Director of Land Protection for Little Traverse Conservancy. “A conservation easement permanently removes the ability to do things that will significantly impact the ecological aspects of the land. If a building or building cluster already exists, but there is enough undeveloped land around it, we can exclude the building ‘envelope’ from the easement.”

For information on the variety of ways you can protect not only your property but the Lake Charlevoix watershed, see the contact information shown below.

To find out more information about how you can protect your property and the Lake Charlevoix Watershed please contact:

**Little Traverse Conservancy**  
231.347.0991  
[www.landtrust.org](http://www.landtrust.org)





# Memorials

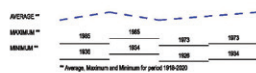
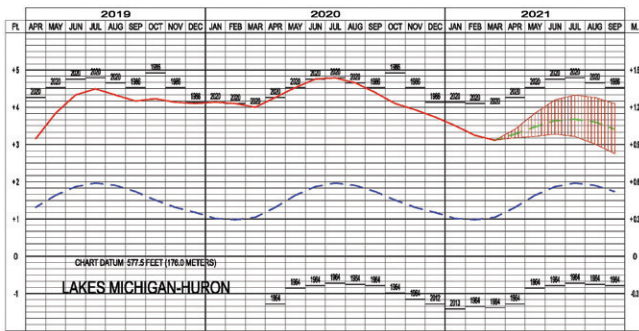
**In Memory of Craig Leers**  
By Peter & Lisa Shadek

**In Memory of Dr. John Hall**  
By Larry & Gayle Levensgood

## YES, OUR WATER LEVELS HAVE COME DOWN!

You have at least some beach, and your dock will be out of the water this summer. That's all good news! The predictions of the Corps of Engineers for our Great Lakes was quite accurate this time as we are now seeing an official 20" drop from last summers high water. Of course you remember that what goes down will surely reverse itself and go back up. Our Great Lakes water levels are predicted to begin rising again this spring as they normally do, and our direct connection to Lake Michigan means Lake Charlevoix will rise as well. There are no predictions yet as to what happens next winter, except that yes, our waters will rise once again.

LAKES MICHIGAN-HURON WATER LEVELS - APRIL 2021



Scan here to view detailed graph.



Join now!

**Lake Charlevoix Association**  
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www.lakecharlevoix.org

Non-Profit Org.  
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## NEWS BITES...

PHOTO CREDIT: LINDA BOSS

**A Big Thank You:** Many thanks to Kelley Smith and Mike Costa for their hours of work helping the LCA transition to new management software and also to Andy Heroy and Casey Pursel for their help coaching our board task force about making software decisions.

**Poker Run:** We are cautiously optimistic that we will be able to have our poker run on Friday, August 20, 2021. Online registration should begin around June 1, with a link emailed and posted on our Facebook page. Please be sure to include your email address when you renew your membership, so you don't miss our invitation to register.

**Online Renewals:** We have a new credit card processor, so if you join or renew your membership online, it may look a bit different this year. Also, if you were set up for recurring payments in the old system, you will need to set it up that way again in our new system. Thank you!

**Renewal Time:** May is our renewal time for LCA Memberships. If you have not yet renewed/joined, please take a moment to do so with the enclosed membership envelope. You may also renew/join online through our website: [www.lakecharlevoix.org](http://www.lakecharlevoix.org) The LCA lake protection programs are only possible through the generous contributions of our members. The LCA is a 501(c)3 and donations are fully tax-deductible.

**LCA License Plates:** LCA license plates are available for \$10.00 with local pick up or \$15.00 to mail. If you would like one, please contact us at [info@lakecharlevoix.org](mailto:info@lakecharlevoix.org)

**Annual Meeting:** The LCA plans to hold an Annual Meeting with a Boat Wash Demonstration this August. Please check our Facebook Page or Website for updates. Also be sure that we have your email address, as we will be sending an email announcement with details.