Current Reflections
Summer 2021

Tip of the Mitt Watershed Council

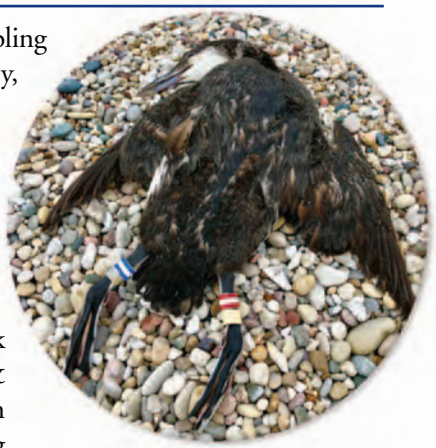
In our fight to protect loons, VOLUNTEERS are the key.

Common Coast's Damon McCormick found this dead loon in October 2019 just beyond the southern limit of Sleeping Bear. With its belly up, the bird does resemble a large white stone.

Photo courtesy of Damon McCormick

Avian Botulism Threatens Loons

People love loons. Lake residents revel in hearing their warbling calls echo across the water on quiet nights. Unfortunately, these birds are in danger. Thousands of common loons, dead from botulism poisoning, have washed up on Great Lakes shorelines in the last few decades. The Watershed Council is looking for more Avian Botulism Monitoring Program volunteers to help inform research on how the toxin is affecting this iconic species.



A volunteer found this banded common loon at Sleeping Bear Dunes in October 2019. McCormick collected feather and tissue samples from the bird for research purposes.

Photo courtesy of Damon McCormick

The impacts of avian botulism has Damon McCormick worried. McCormick is part of Common Coast Research & Conservation (Common Coast) in Houghton, a Michigan nonprofit that uses banding and blood and feather sampling to track loon populations and assess their health. One of Common Coast's original concerns was mercury poisoning in loons. However, with the rise of avian botulism taking a toll on the birds, Common Coast has expanded its focus.

The botulism that's killing loons and other water birds is produced by a *Clostridium* bacterium that's common in deep lake sediment. Invasive species, such as round gobies and quagga mussels, lack of oxygen from decaying *Cladophora* algae, warm Lake Michigan temperatures and low water levels, and increased phosphorus runoff into the lake are all thought to contribute to botulism outbreaks. These outbreaks typically begin in late summer and spike October and November. When birds eat fish or mussels contaminated by botulism, the toxin paralyzes them, causing them to drown and wash up along the shoreline. McCormick estimates that roughly 30,000 dead waterbirds have been documented on the Great Lakes during botulism outbreaks since 1998. However, since monitoring covers only a fraction of the shoreline, he guesses that well over 100,000 birds have died from the toxin. Loons have been the hardest hit. McCormick said that Seney Wildlife Refuge in Michigan's Upper Peninsula has seen a 40% decrease in territorial loon pairs over the past decade.

Common Coast relies on data from outside organizations to track loon deaths from botulism. That's where the Watershed Council's hardworking avian botulism monitors enter the picture.

To Sue Stewart, a former member of the Watershed Council's Board of Directors, dead loons on a beach look like large, oval, white stones. Over the years as an avian botulism monitor, she's developed an eye for the weather conditions and sections of Lake Michigan beach where she's most likely to find them.

Watershed Council staff have trained Stewart and other volunteers to look for signs of freshly dead birds that can be tested for avian botulism. Birds that have been lying on the beach for too long to test are disposed of so that predators and scavengers, such as eagles or foxes, aren't poisoned by the toxin.

Continued on next page.

Tip of the Mitt Watershed Council
426 Bay Street, Petoskey, MI 49770
(231) 347-1181 • (231) 347-5928 fax
www.watershedcouncil.org

Watershed Council Staff

Gail Gruenwald,
Executive Director and Staff Attorney

Administrative Team

Molly Voorheis,
Business Manager

Natalie Walts,
Office Manager

Development/Communications Team

Jen DeMoss,
Communications Director

Kate Cwikiel,
Communications and Development Specialist

Debbie Esposito,
Membership and Development Coordinator

Education Team

Eli Baker,
Water Resources Education Coordinator

Policy and Advocacy Team

Jennifer McKay,
Policy Director

Grenetta Thomassey, Ph. D.,
Watershed Policy Director

Watershed Protection Team

Jennifer Buchanan,
Associate Director

Caroline Keson,
Monitoring Programs Coordinator

Lauren Dey,
Watershed Management Coordinator

Member of: Michigan Environmental Council, EarthShare Michigan

Reflections From Our Executive Director

Gail Gruenwald
Executive Director

As many of you have heard by now, this is my last summer as your executive director. I celebrated my 37th anniversary on May 14. While facing retirement is bittersweet, I am confident that I am leaving the Watershed Council financially sound and in the hands of great leadership. The Watershed Council has grown and matured since 1984 when I arrived in Petoskey, fresh out of law school. But our mission, integrity, and vision for clean water has not wavered. We have certainly faced challenges and undoubtedly will face more in the coming years. Our underpinning of sound science and policy will continue to guide our programs and ensure the success of our work to protect Northern Michigan's waters well into the future.

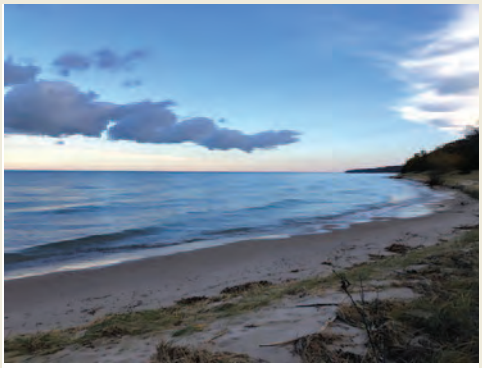
When I reflect on the last 37 years, I am most proud of the following accomplishments. First, I am proud to have hired and mentored incredible staff and environmental leaders, several of whom will carry the organization into the next decade or more. I am also pleased to have shepherded the Watershed Council from a tiny organization to a regional leader in water resource protection. Third, I am happy to have fundraised for and purchased our home at the Freshwater Center. I am also proud of my work to build endowment funds and the Asset Repair and Replacement Fund for long-term financial sustainability. Finally, I am proud to have worked to foster mission-driven programming built on our strong reputation and integrity.

Obviously, I didn't do any of these things alone and want to thank all of the staff, board, volunteers, and members who worked with me over the years. I am also grateful for the hundreds of members, partners, board members, and staff with whom I have built friendships and lasting relationships. Thank you for the gift of this work over these many years and the privilege of a career spent protecting the waters I love.

Protecting the Loons (Continued)

Stewart spent years as a U.S. Forest Service social scientist in Chicago. The loon project gives her another outlet to use her considerable skills as a researcher and educator.

"When I walk the beaches and pick up dead loons, I often run into other people," said Stewart. "Typically, when you see something dead you give it a wide berth, but people are curious about the loons. It's a great way to spread the word about the Watershed Council and the work we're doing."



Volunteer avian botulism monitor Sue Stewart's favorite stretch of beach to monitor at Good Hart.

Photo courtesy of Sue Stewart

The Watershed Council and the loons need help from more volunteer monitors. As McCormick explained, the volunteer monitoring program contributes to international efforts to understand how loons live and how intersections between mercury levels and botulism might affect their precarious populations. Volunteers can report loon carcass locations to Common Coast staff, who will use feather and tissue samples for genetic and toxicological research.

Interested in volunteering with our Avian Botulism Monitoring Program this year? Contact Monitoring Programs Coordinator Caroline Keson at info@watershedcouncil.org or 231-347-1181. If you want more information about loons and the threat posed by botulism, contact Damon McCormick at dlm@commoncoast.org or 906-202-0602.

Protecting Walloon Lake at the Shoreline and Beyond

Thirty miles of kayaking is no easy feat, but that's exactly what Watershed Council staff completed to survey the Walloon Lake shoreline. While water chemistry assesses water quality at a point in time, shoreline surveys are another tool to help us understand long-term risks to water quality from events happening on land.

Natural shorelines have vegetation that prevents erosion and filters sediments and nutrients. They may also have wetlands that filter water through soil before it reaches the lake. Changes to shorelines, such as removing vegetation, hardening it with seawalls, and beach sanding close to the water, can significantly impact water quality. That's because natural shorelines act as buffers at the interface between land and water to prevent pollutants from entering water bodies, while modified shorelines can allow pollutants to flow directly into lakes when it rains.

The Last Five Years

Frequent monitoring over the past three decades shows that water quality remains high on Walloon Lake; however, the risks continue to increase. The Watershed Council has performed six shoreline surveys since 1998. Our 2020 survey showed that lake residents are both helping and hindering good water quality. Shoreline vegetation, or greenbelts, were found to be adequate in protecting the lake on over half the shoreline. The number of properties with high-scoring greenbelts has increased since 2016 but so has the number of properties with no greenbelt at all. Cladophora algae has been found in fewer areas; however, areas that already had the alga have more. Erosion has decreased, but that may be a sign of increased armoring—79% of the lake has a hardened shoreline with rock and boulder riprap and seawalls. These types of shorelines are unnatural for Walloon Lake, which is better protected with natural shoreline restoration techniques, including bioengineering methods.

The Last 20 Years

Trends over the past 20 years show that the shoreline area is increasingly impacting lake health. Since 2001, development has increased around Walloon Lake so that 89% of the riparian properties have impervious surfaces like roofs, roads, and driveways. The percentage of altered properties has increased from 66% in 2001 to 81% in 2020. Cladophora density has increased and erosion has become more prevalent. Compared to other lakes in Northern Michigan surveyed by the Watershed Council, Walloon is the second worst for percent of properties with alterations and the fifth worst for percent of parcels with Cladophora. It will take many hands making small changes to see improvements in shoreline practices around the Walloon Lake shoreline.

Beyond the Shoreline

The Walloon Lake Watershed stretches 21,000 acres over hilly wineries, exciting trails, and secluded swamps. The watershed itself is perched 100 feet above Lake Michigan, to which it eventually drains via the Bear River. While stewardship at the shoreline can reduce adverse impacts of development and land management, land protection through preservation agreements and conservation easements can have a significant, long-term positive impact. But how do we decide what gets protected? The Watershed Council looks at individual land parcels through the lens of the land's ability to improve or degrade water quality. For instance, an area with soils able to filter water and recharge groundwater would be highly valued for protection. Clean groundwater supports lake health and our drinking water. An area with steep slopes may hurt water quality if the slopes erode and carry nutrients with them. Keeping an area of steep slopes covered with vegetation would prevent unnecessary erosion. The Watershed Council ranked parcels in the Walloon Lake Watershed to support Walloon Lake Association and Conservancy's (WLAC) protection goals.

Current land that is protected in the form of trust land or conservation easements amounts to 10% of the watershed, and WLAC's goal is to achieve 30% protection by 2030. One hundred properties are protected, and doubling that number would achieve 30% protection. The most highly valued parcels for protection were scattered throughout the watershed, proving that protection at the shoreline and beyond is important in maintaining high water quality. Learn more about these protection tools at https://tinyurl.com/walloonforever.

Line 5, Climate, and Protecting our Waters from Oil and Natural Gas Liquids Pollution

For several years, the Watershed Council has devoted significant time and resources throughout our service area to prevent an oil and natural gas liquids disaster from the Line 5 pipeline. We have worked with Enbridge, commented on state and federal agency proposals, hosted educational workshops and events, and, most recently, intervened in the Michigan Public Service Commission (MPSC) review of the Enbridge proposal to construct and operate a liquid petroleum pipeline in a tunnel under the Straits of Mackinac.

We have reported on these efforts and the status of the pipeline in this newsletter and through other means since the beginning. Recently, a few members have disagreed with our position on the Line 5 Great Lakes Tunnel permitting process. We wanted to clarify our concerns about the tunnel and report on one very positive outcome from the MPSC.

The Watershed Council has significant environmental concerns about the proposed tunnel, including:

- Impacts to Great Lakes coastal wetlands: The proposed tunnel site impacts one of the most pristine Great Lakes coastal wetlands in Lakes Michigan and Huron.
- Threatened and endangered species: Over 10,000 Houghton's goldenrod and dwarf lake iris plants, both federally-listed threatened species, are present on the north side in Mackinac County. Enbridge proposes to relocate only 50% of these plants to mitigate the loss.
- Migratory birds: The Straits of Mackinac are important for waterbird migration, with tens to hundreds of thousands of individuals passing through the area each spring and fall, including more than 25 species of waterfowl, common loons, grebes, and cormorants. In addition, summer breeding birds include the federally endangered piping plover and other species with special value and protected status, such as bald eagles.
- Environmental impact statement: A full environmental impact statement to assess all potential impacts of the project has not been conducted by the Michigan Department of Environment, Great Lakes, and Energy or the U.S. Army Corps of Engineers.

Until these concerns are addressed, the Watershed Council will continue to work to prevent these impacts.

On a positive note, a monumental ruling came from the Michigan Public Service Commission (MPSC) in April. The MPSC ruled that they will consider the impacts of climate change as they review an application for Enbridge to relocate a portion of Line 5 into a tunnel under the Straits of Mackinac. This is the first time any statewide agency has acknowledged that greenhouse gas emissions need to be reviewed under Michigan's Environmental Protection Act (MEPA). This ruling sets a precedent for the siting of pipelines in Michigan. Now, climate change impacts will have to be reviewed for all future proposals that go before the MPSC.

As Michigan seeks to address the climate crisis, it is time for all agencies to consider the impacts of climate change on proposed projects. For pipelines, one of the major environmental impacts is its contribution to climate change. We applaud the MPSC for their decision, and we're proud to have supported this watershed moment for climate in Michigan.

Michigan Environmental Hall of Fame

Hall of Fame Induction

We announced last year that Executive Director Gail Gruenwald was to be inducted into the Michigan Environmental Hall of Fame. Although COVID-19 restrictions prevented the ceremony from occurring in 2020, the induction will take place August 17 at the Loosemore Auditorium on the Pew Campus of Grand Valley State University in Grand Rapids at 6:30 p.m. We are very proud of the work that Gruenwald has undertaken to protect Northern Michigan's waters and happy that her dedication will be recognized this summer.

Congratulations Gail!

Sophie Goodnough sprays off a boat at an event on Lake Skegemog. The lake harbors invasive zebra mussels, and it's important to make sure they don't hitchhike to other lakes on boat hulls or trailers.

MOBO on the Go-Go

With summer in full swing, we're enjoying Northern Michigan's freshwater resources. One of the best ways to do that is onboard a boat, kayak, canoe, or paddleboard. Unfortunately, there's the potential for us to transport aquatic invasive species, such as zebra mussels or Eurasian watermilfoil, as we explore our lakes and streams. In fact, the threat of spreading these harmful species is so real that it is illegal to launch or transport a boat in Michigan if there are aquatic plants or other organisms attached to it. Many invasive species are thought to have been introduced to Michigan by hitchhiking their way here on boats, trailers, or even wading boots.

Thankfully, there's a relatively simple method for preventing the spread of invasive species: cleaning, draining, and drying our boats and equipment. A simple wash will remove many of the plants or other organisms from your boat and trailer. Follow up with a five-day drying period to help remove anything that the wash may have missed.

The Watershed Council's boat washing station (nicknamed "MOBO") is returning to a lake near you this summer to spread awareness about invasive species and practice the principles of clean, drain, and dry. Thanks to funding from the Michigan Invasive Species Grant Program and the U.S. Forest Service, Watershed Council staff and community members, including lake associations and the Michigan Department of Natural Resources, will be hosting events at boat launches all over Northern Michigan. MOBO is designed to wash boats using pressurized and heated water. That water is captured using a portable water containment berm and disposed of responsibly offsite in order to prevent the further spread of invasive species.

We want to help you prevent the spread of invasive species in the lakes you love. If you're out on the water and you see MOBO at your local launch, be sure to stop by to say hi and get a free boat wash!

Tip of the Mitt Watershed Council
AQUAVIST NETWORK

ERCOL Local Government Event Unveils New Watershed Plan

Tip of the Mitt Watershed Council teamed up with The Watershed Center Grand Traverse Bay to host a local government event for the Elk River Chain of Lakes (ERCOL) on March 23. The event introduced local governments to the new watershed management plan that is currently being reviewed for approval from the U.S. Environmental Protection Agency (EPA) and the Michigan Department of Great Lakes, Environment, and Energy (EGLE).

Watershed management plans bring together community partners to assess the health of the watershed and identify sources of stress that can impair water quality. These plans include implementation steps that will accomplish stated goals and objectives. Additionally, specific actions are included to help educate the public about ways to prevent pollution from stormwater runoff and address sources that contribute to nutrient and sediment pollution in the Chain of Lakes.

A recording of the event can be found on the Watershed Council's YouTube channel at http://bit.ly/ERCOL. It includes a presentation on baseline social indicator surveys conducted with watershed residents, shoreline property owners, and local officials between 2017 and 2019. These survey results helped shape the information and education section of the new plan. The recording also walks through the various sections of the new watershed management plan. When the plan is approved, it will be posted to our website. If you live in the ERCOL and want to get involved, please email info@watershedcouncil.org.

Where Did the Water Go?

The Impact of Drought on Michigan Waters

This time last year, Michigan didn't have any areas of moderate to severe drought. In fact, last year was a time of record-high water levels and flooding in some areas. This year, however, almost all of Lower Michigan is officially experiencing moderate to severe drought.

Compared to 2020, 2021 lake levels have seen a dramatic decline due to drier than normal weather. The U.S. Army Corps of Engineers announced that January 2021 was the driest on record for the entire Great Lakes drainage basin. February and March had around 50% of normal precipitation over the drainage basin. Over the past year, precipitation over the basin is about 18% lower than normal.

After reaching record high water levels in 2020, Lake Michigan-Huron has dropped more than 20 inches. April is normally a month with large water level rises from winter snowmelt and warmer air bringing heavier spring rain. However, this April Lake Michigan-Huron only rose one-tenth of an inch, as opposed to its usual several-inch rise. One inch of water on Lake Michigan and Lake Huron contains 800 billion gallons of water. Lake Michigan-Huron now holds 11 trillion fewer gallons than this time last year.

The six-month forecast projects Lake Michigan-Huron to be 16 to 24 inches below last year's record high levels through October. However, the lake will remain 17 to 19 inches above long-term average levels during that same time period. Lake Michigan-Huron will still have higher than average water, but not the damaging high water levels we saw last year.

While the drought is proving to be good news for lake levels, it may pose problems for private wells. A recent study from the U.S. Geological Survey (USGS) found that drought may lead to elevated levels of naturally occurring arsenic in private water wells. Arsenic is a metal that can naturally occur in bedrock and sediment. However, chronic exposure to arsenic from drinking water is associated with an increased risk of several types of cancer, developmental impairments, cardiovascular disease, and impacts on the immune and endocrine systems. According to the USGS, about 226,000 Michiganders who use private wells may already get too much arsenic exposure. The study found that about 94,000 more people in Michigan could be at risk in times of drought – an increase of more than 40%. The longer the duration of the drought, the greater the probability of having elevated arsenic.

To test for arsenic, call the Michigan Department of Environment, Great Lakes, and Energy (EGLE) Drinking Water Laboratory at 517-335-8184 or any commercial laboratory certified to test for arsenic.

Monthly mean water levels for the previous year and the current year to date are shown as a solid line on the hydrographs. A projection for the next six months is given as a dashed line. This projection is based on the present condition of the lake basin and anticipated future weather. The shaded area shows a range of possible levels over the next six months dependent upon weather variations. Current and projected levels (solid and dashed lines) can be compared with the 1918-2020 average levels (dotted line) and extreme levels (shown as bars with their year of occurrence).

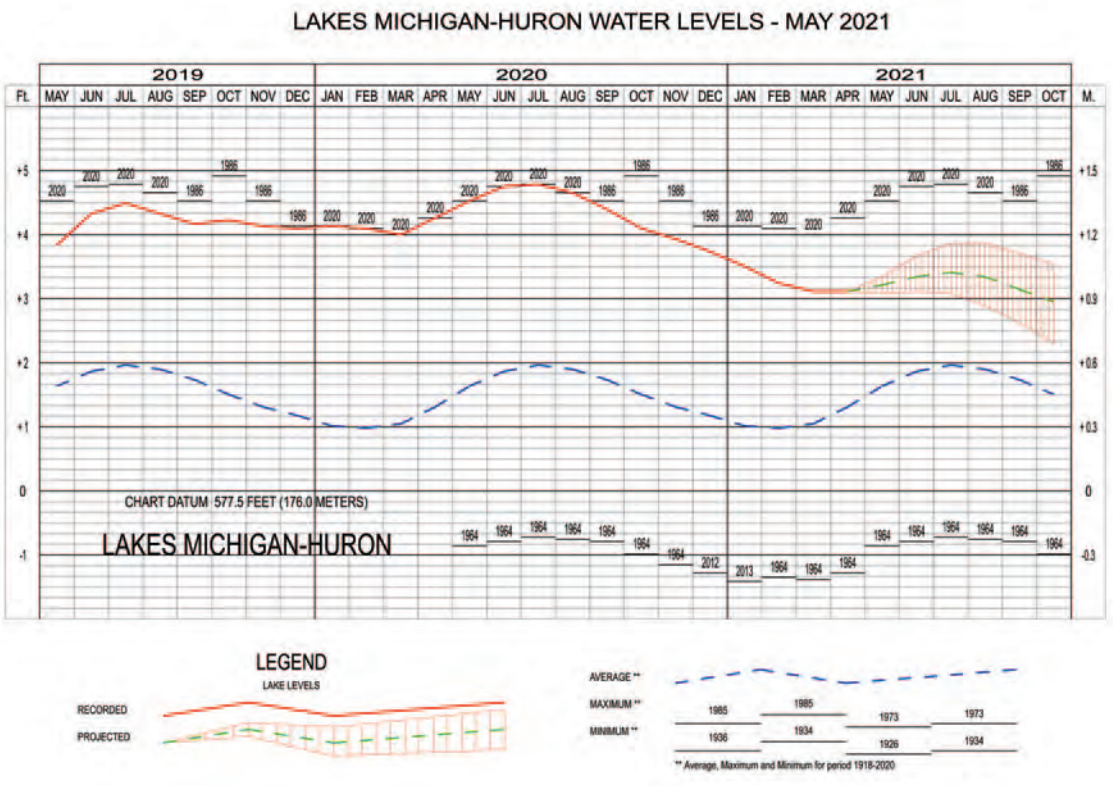


Image: Six-Month Forecast for Lake Michigan-Huron from the U.S. Army Corps of Engineers, May 2021

Harmful Algal Bloom Complaints Creep North

While algae, bacteria, and plants are normal inhabitants of lake ecosystems, sometimes they can grow excessively and become harmful. Specifically, colonies of a particular kind of cyanobacteria, also known as blue-green algae, can produce toxins that are harmful to humans, pets, and other animals. The algae are called *Microcystis* and the toxin they produce is called microcystin. The result is a harmful algal bloom (HAB). While HABs are rare in Northern Michigan, they are very disruptive to aquatic wildlife, swimmers, and anglers. In the last two years, Black Lake in Cheboygan County has experienced two blue-green algae blooms, one of which proved to be toxic in 2020. Understanding HABs' causes and characteristics can help individuals, resource managers, and health departments protect people and wildlife. The Michigan Department of Environment, Great Lakes, and Energy (EGLE) measures the toxin in the water, which is why it's important they get involved at the first signs.

Not a Harmful Algal Bloom

Individual leaves (3-5mm) floating on the surface of the water→likely duck weed

Attached to rocks or you can pick it up with a stick→likely *Cladophora*, another kind of algae that grows in hair-like strands

Yellow→likely pollen

Turquoise like the Caribbean Sea→clear water mixed with limestone deposits causes this beautiful phenomenon

Maybe a Harmful Algal Bloom

Small, green, pinhead-sized particles that collect in a layer on the water's surface in calm weather

Looks like a paint spill or pea soup

Nearby water is brownish-green, milky green, or bluish

Forming clumps, smells like grass clippings or rotting garbage

If you suspect an algal bloom...

DOs

Email algaebloom@michigan.gov with the location and a picture. EGLE can identify whether it is cyanobacteria.

If people or pets may have had contact with or swallowed water from a HAB and feel sick, call your doctor or Poison Control at 800-222-1222, or your pet's veterinarian. If symptoms are severe, get emergency medical attention as soon as possible. For more information on HABs and health, call the MI-TOXICS and Health hotline at 1-800-648-6942. You can also call the Michigan Department of Agriculture and Rural Development for pet concerns at 1-800-292-3939.

Remember: not all algal blooms are harmful, but we can't know for sure unless the bloom is tested for the microcystin toxin.

DON'Ts

Don't sample the bloom yourself.

Don't swim in or let pets drink the water of a bloom.

Follow the MDHHS Eat Safe Fish Guidelines and eat only the fillets of fish (and not the guts) caught near a bloom. This reduces the danger of eating fish from areas affected by HABs and from other chemicals that are regularly found in them. The guts should be thrown away and fillets should be rinsed with fresh water before cooking. Find the MDHHS guidelines at michigan.gov/eatsafefish.

Harmful algal blooms can look like a green paint slick.

Background Photo: Todd Marsee, Michigan Sea Grant

Thank you
Gail Gruenwald

As you may have read in our executive director's column, Gail Gruenwald is retiring after almost 38 years of service to the Watershed Council, our community, and Northern Michigan's waters. Since the beginning of her tenure, she has advanced the advocacy, water monitoring, restoration projects, and educational outreach for which the Watershed Council is known. Please join us as we share our memories of Gruenwald and accolades for all she has done to protect our waters.

I feel especially privileged to have worked with Gail both as a volunteer and a board member. She is an incredible historian of and advocate for water protection activities who has supported the implementation of sustainable, strategic practices. She has established and enabled a top quality staff to accomplish science-based protection and advocacy objectives through changing times.

- Claire Rasmussen,
Former Board of Directors president

All these years, Gail has been a leader and coordinator, implementing the Watershed Council's goals and objectives and keeping Northern Michigan waters clean for all to enjoy. By sharing actionable information on the Watershed Council's initiatives and the work of other communities and government agencies around the Great Lakes and the country, she gives people the knowledge to make a difference. Thank you, Gail, for making my dreams come true. You are a true environmental hero!

- Ruth O'Gawa,
Former executive director and co-founder of Tip of the Mitt Watershed Council

Gail Gruenwald is the Tip of the Mitt Watershed Council. Sure, she had some help. But it has been her character and leadership that have directed the staff, managed the board, and resolutely pursued the mission to achieve the highest level of respect and achievement. She may be the single most influential person to have positively impacted the quality of life in Northern Michigan. Every visitor, every business and land owner, every municipality, every boater/swimmer/beachcomber, and anyone else who has ever marveled at the pristine beauty of our area should be grateful for her work.

- Jim Ford
Formerly on the Board of Directors

For over 40 years, ever since we at the Biological Station helped found the Watershed Council, I have kept a highly interested and critical eye on the organization. It has always been pleasing and rewarding to observe its growth, steadfast science-based goals, and effectiveness in this region and well beyond. There were significant and positive changes after Gail became director and these continued steadily. In essence, Gail was a perfect leader!

- Mark Paddock
Watershed Council co-founder

Congratulations, Gail, on 37 great years at the Watershed Council! Under your skillful leadership, the organization has become a powerful and effective force for protecting Northern Michigan's water resources. I have great memories of my 17 years working for you, and I'm proud of all that we accomplished. And, I'll look forward to making some more memories with you on adventures in your retirement.

- Doug Fuller,
Former water resource program director

Gail has been a stabilizing force for the organization over the years. I have observed her navigate challenges that would set most people off course, but time and time again she has always remained focused on Northern Michigan's water resources. I cannot imagine how the Watershed Council could have achieved all that we have without her leadership.

- Jennifer Buchanan,
Associate director

The Watershed Council was founded 42 years ago, and Gail has been its executive director for the last 34 years. It is through her leadership that the organization has become an influential force in environmental protection, not just in Northern Michigan but throughout the state.

- Bob Kingon,
Board of Directors president

Gail has been instrumental in leading Tip of the Mitt Watershed Council from a small nonprofit to a multi-faceted, well-respected organization on the state and national levels. She has led with great passion and determination, working closely with the Board of Directors, a committed staff, amazing volunteers, and loyal donors. Gail's legacy for protecting our water resources will forever live on throughout Northern Michigan. She will be greatly missed by all, and we wish her the very best as she enters retirement.

- Jennifer McKay
Policy director

Gail is an amazing leader. Every day I put into practice the lessons I learned while working for her at the Watershed Council. Even though my second career takes me out of environmental protection, Gail's wisdom echoes in my ear as I strive to be a great leader:

"Take the long term view--it's not a sprint, it's a marathon."

"Integrity beyond reproach."

"Hire people whose mission aligns with the organization."

"Focus on the science, not the politics."

- Wil Cwikiel,
Former policy director

I have served on a number of boards in my career but none that was as professionally run nor accomplished as much as Tip of the Mitt Watershed Council, and that is due in no small part to Gail's leadership. I am grateful for the opportunity to work with her, and I learned many things from Gail. She brings reason, balance, knowledge, and a willingness to hear all sides of an issue in making oftentimes hard decisions. Further, she has a wonderful sense of humor that puts members at ease so that we could get to the task at hand. Gail does not seek the limelight but is 100% a team player. Most important, she has surrounded herself with a remarkably talented staff. She often said she has the finest team to work with on watershed issues, and for that we members should be eternally grateful. She leaves the organization in a strong and healthy position for the future. This is what leadership is all about.

- David Crouse,
Former Board of Directors president

Grant Announcements

Burt Lake Watershed

The Michigan Department of Environment, Great Lakes, and Energy has awarded the Watershed Council $153,938 for our project, Protecting High-Quality Water Resources in the Burt Lake Watershed. Through this federal Clean Water Act Section 319 and Clean Michigan Initiative-Nonpoint Source Pollution Control grant, we plan to install 1,000 feet of shoreline improvements, promote sustainable riparian practices, and support stronger environmental ordinances in the Burt Lake Watershed.

Watershed Academy

The Watershed Council is excited to announce two recent awards to support our Watershed Academy. One is from the Great Lakes Fishery Trust: Fostering the Next Generation of Great Lakes Stewards. The award of $56,920 will help to support the program for two years. The second is a $3,000 People Fund Grant from the Great Lakes Energy Electric Cooperative. Over the past six years, the Watershed Academy has helped to increase awareness and understanding of water resources in Northern Michigan by engaging students from regional high schools in meaningful explorations of their local watersheds. These experiences equip participants with the tools and knowledge to become effective stewards of natural resources through place-based stream monitoring experiences. With support from the Great Lakes Fishery Trust and Great Lakes Energy People Fund, the Watershed Council will continue to foster Northern Michigan millennial stewards and make the program available to students and teachers. We are grateful for their support and look forward to engaging with many more Watershed Academy students in the coming years. If you have any questions about the Watershed Academy, contact Eli Baker, water resources education coordinator, at (231) 347-1181 or info@watershedcouncil.org.

Volunteer Stream Monitoring

The Watershed Council was awarded $2,000 from the Michigan Clean Waters Corps to support our Volunteer Stream Monitoring

Improving Aquatic Connectivity in the Crooked River Watershed

You may recall from previous Current Reflections newsletters that the Watershed Council has partnered with the Emmet County Road Commission to upgrade road/stream crossings (RSX) over tributaries to Crooked and Pickerel Lakes in an effort to improve passage for fish and other aquatic organisms, restore local hydrology, and reduce sediment loading to these cold-water streams. The most recent and largest of these RSX improvement projects is currently underway at Banwell Road over Berry Creek (also referred to as Cedar Creek), a tributary to Pickerel Lake. The project will replace two undersized culverts with a clear-span timber bridge, which will allow brook trout and other fish species access to valuable habitat both upstream and downstream of the crossing. Thank you to our funding partners - the U.S. Fish and Wildlife Service and the Michigan Department of Natural Resources, as well as the Emmet County Road Commission - for making this project possible.

Program. The grant is awarded to organizations to foster stewardship and provide valuable data on Michigan streams. The funds will support staff time for training our new stream volunteers this spring and fall and monitoring efforts.

Keep on Truckin'!

Watershed Council staff have put thousands of miles on our beloved Chevy Colorado, but the time has come for an upgrade. Thanks to support from both the Charlevoix County Community Foundation and the Petoskey-Harbor Springs Area Community Foundation, we were awarded a total of $20,000 for the purchase of a new-to-us truck for hauling our Boston Whaler, our mobile boat washing station (MOBO), and a kayak trailer, as well as other day-to-day travel. We are grateful for the support of both community foundations and look forward to many more miles on the road traveling between our service area's lakes and streams to conduct our important work.

Associate Director Jennifer Buchanan stands at the Banwell Road bridge site.

Harbor Springs High School students take some classroom time to identify macroinvertebrates from Five Mile Creek.

Making Watershed Education Programs Safe and Effective

COVID-19 changed life for many of us over the past year. The Watershed Council's education programs reflect those changes. Many of our ongoing education programs were cancelled, including Students Experience Lake Charlevoix, and several of the schools that we have partnered with for years have been unable to participate in our water resources programs.

However, things are looking up. Students from eight schools were able to participate in stream monitoring as part of the Watershed Academy this spring, including Mackinaw City, Pellston, Alanson, Harbor Springs, Boyne Falls, Charlevoix, Bellaire, and Elk Rapids. We also had biology students from North Central Michigan College out for stream monitoring in Russian Creek. We were able to help these students better understand their connection with their watersheds and how to protect them. They put that knowledge to work, assessing the health of local streams by collecting water chemistry and macroinvertebrate data while learning about human impacts within their watersheds.

Thanks to a grant from the Great Lakes Fishery Trust and the support of local lake associations and community partners, we are able to continue to provide hands-on water resources programs to students in our service area. We are working to ensure that future programming includes options for virtual and outdoor interaction so that we can spend time with each other while following safety guidelines. We are looking to the upcoming school year with excitement and hope to continue to foster the next generation of watershed stewards.

Alanson High School students monitor Oden Creek for Watershed Academy.

Monitoring for New Zealand Mud Snails in Michigan Rivers

By Guest contributor Jeremy Geist, Great Lakes stream restoration manager at Michigan Trout Unlimited

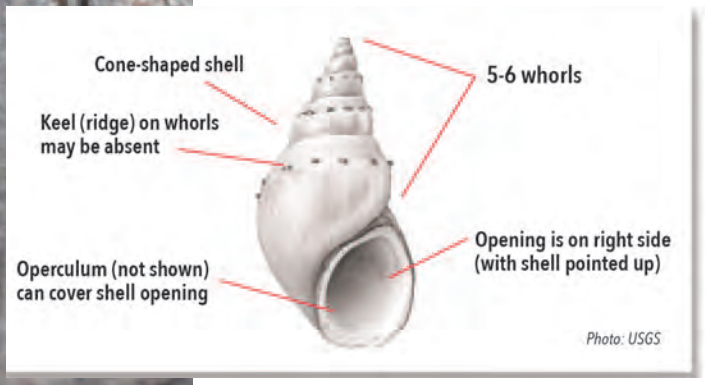
Invasive New Zealand mud snails (*Potamopyrgus antipodarum*) (NZMS) are native to streams and lakes of New Zealand and have been making their way across the globe, establishing populations throughout five continents. In North America, NZMS were first discovered in the Snake River in Idaho in 1987. They've been rapidly expanding their range across the American west and into the eastern part of the country. The snails were first documented in Lake Ontario in 1991, but only recently have they been detected in inland streams and rivers. In Michigan, NZMS were found in the Pere Marquette River in 2015 and shortly after were detected in the Au Sable, Boardman, Upper Manistee, and Pine Rivers of northwest Michigan.

New Zealand mud snails can achieve extremely high densities in the rivers they colonize. These high densities, coupled with rapid growth rates, mean that NZMS monopolize food resources. This can have negative consequences for the overall ecosystem, local macroinvertebrate communities, and fish populations. In the western U.S., NZMS impact trout health when trout consume NZMS and they pass through the trout's digestive tracts alive.

Trout Unlimited (TU) has been working with partner groups such as the Michigan Department of Natural Resources; Michigan Department of Environment, Great Lakes, and Energy (EGLE); Oakland University; Grand Valley State University; Michigan State University; and citizen scientists with organizations like the Watershed Council to track the snails' spread, increase awareness, and improve understanding of the potential impacts they can have on Michigan waterways. Using citizen scientists to monitor their local waterways for NZMS not only extends the reach of agencies and institutions but helps researchers and resource managers evaluate how the snails spread and their potential impacts. Given that many local conservation groups already facilitate citizen science programs, such as water quality monitoring and macroinvertebrate surveys, NZMS monitoring is easily integrated into these existing programs. The data acquired from these monitoring efforts contributes to the larger effort to track and develop strategies for minimizing their spread.

A regional approach for New Zealand mud snail management, supported by the Great Lakes Restoration Initiative, has led to the creation of the Great Lakes New Zealand Mud Snail Collaborative. The collaboration consists of a region-wide working group to help improve knowledge on the impacts of mud snails, minimize their spread, better inform management activities, and raise public awareness in the Great Lakes. Many useful resources can be found at www.nzmscollaborative.org.

For more information about NZMS, upcoming volunteer opportunities with Trout Unlimited, and questions, contact Jeremy Geist: jeremy.geist@tu.org.



Many useful resources about New Zealand Mud Snails can be found at www.nzmscollaborative.org

Annual Great Lakes Day Goes Virtual

The Great Lakes are national treasures. They power the region's economy, provide drinking water to tens of millions of Americans, and promote a healthy, outdoor way of life. Even with their majesty and size, the Great Lakes face serious and urgent threats compounded by climate change. To make sure we are addressing these problems and restoring the Great Lakes and communities around them, every year Tip of the Mitt Watershed Council travels to Washington, D.C., for Great Lakes Day, an event that brings together regional leaders and members of Congress who play a critical role in shaping Great Lakes policies. This year, we met with members of Congress and advocated for the Great Lakes through a virtual platform to keep attendees safe. We were joined online by hundreds of other advocates from around the Great Lakes region who were meeting with their representatives from Wisconsin, Minnesota, Illinois, Indiana, Ohio, Pennsylvania, and New York.

Throughout the week, Policy Director Jennifer McKay urged members of Michigan's congressional delegation to support key clean water priorities to accelerate progress, foster equity, build resilience, and ensure the Great Lakes remain treasured assets for people and wildlife. Federal priorities include fully funding the Great Lakes Restoration Initiative, investing in water infrastructure to protect drinking water and rebuild failing wastewater and stormwater systems, ensuring that Great Lakes communities are resilient to the impacts of climate change, protecting the Great Lakes Basin from invasive carp and other aquatic invasive species, and restoring clean water protections.

While Great Lakes Day was different this year, our dedication and commitment to the protection and restoration of Northern Michigan's waterways remains the same. We look forward to working with Congress to support the health of our water resources and to boost the nation's investment in water infrastructure.

Welcome Our New Staff

Lauren Dey joined our Watershed Protection Team in May as watershed management coordinator, and we're happy to have her. She was born in Petoskey and went to school at Harbor Springs High School, so she understands the value of clean water. "I'm really excited that I can live and work in Northern Michigan where I was born and raised and protect our water resources," she said.

Dey was a Conservation Biology major at Lake Superior State University. She comes to us from her position as a water quality biologist with the Little Traverse Bay Bands of Odawa Indians Natural Resources Department, or Nibiish Naagdowen. There, she was in charge of water quality monitoring for all the waters within the reservation, wetland monitoring, wild rice restoration, developing wetland regulations, education, and outreach.

In addition to working to protect natural resources, she's spent a lot of her life outside, enjoying Northern Michigan's beauty with her two bird dogs. She enjoys hiking and plenty of beach time.

Among Dey's tasks will be to coordinate all of our watershed advisory committees. Luckily, she's already familiar with quite a few members. "I enjoy the partnerships that already exist, and I'm looking forward to building on those and being able to accomplish more for Northern Michigan's waters as a community," she said.

We are excited to announce that **Kacey Cook** will be joining our staff this August as our new policy and advocacy specialist. Cook grew up in Petoskey and took advantage of the many opportunities to spend time in nature. When she started her undergraduate program in International Studies at Kalamazoo College, the landlocked lifestyle was a shock. "I realized what a privilege it was to spend so much time on the water," said Cook.

Lauren Dey

Kacey Cook

During her undergraduate years, Cook fell in love with law as a concrete tool to make the world a more sustainable and equitable place. She felt defined by the time she spent outdoors with her family in Northern Michigan and sought a program in Environmental Law. She ended up at Indiana University in Bloomington, where she graduated in May. At the time of writing, she was set to take the bar exam in Lansing this July.

Cook is excited to collaborate on projects to protect threatened water resources and work on climate change issues at the Watershed Council. One of the things that drew her to the position was the chance to work in community advocacy. She's also drawn to the staff's wide knowledge base, which she said will offer the background to ensure that her policy and advocacy has practical grounding.

"I've always admired the Petoskey community, and I look forward to being able to work with others towards shared goals," said Cook. "Where else would I rather be than in Northern Michigan doing this kind of work? I'm thrilled to be joining the Watershed Council."

Welcome New Members

4/1/2021 - 6/11/2021

Mr. and Mrs. Mark Arendsen
Mrs. Bonnie Calvin
The Clothing Company
Jan and Art Currey
Holly and Mark D'Angelo
Bill and Ginny Dorner
William C. and Myrna S. Holland
Mr. and Mrs. Jim Howe
Joe and Katie Howe
Mrs. Marie Hulett
Paul and Juditih Ivan
Mr. and Mrs. Russell A. Kittleson
Brandon and Denay Knope
Mr. and Mrs. Michael J. Konicki
Ms. Martha Landis
Ms. Connie Landis
Mr. William Larson Jr.
Mr. and Mrs. William R. Letsche
Anne and Ormond MacDougald
Mr. Jon T. Martin
David and Joy McBride
Mr. and Mrs. Thomas Mooradian
Mr. and Mrs. Dave Nedwick
Christopher and Linda Nelson
Mr. and Mrs. Steven and Denise Nolder
Beth Wiedner and Faiz Razi
Aaron Sheehan-Dean
Carole Erbel and Frank Shumway
Brian Tallant
Mrs. Debra Vagasky
Mr. and Mrs. David VanDam
Mr. and Mrs. Gary L. Wegenke

Honorarium & Memorial Gifts

Memorials

Lindy Buffington

Mr. John Kafer
Michael and Debbie Esposito
Joseph and Paula Buckman
Nicholas van Damme
Encore Financial Group
Dan and Jess Myers
Kathy Hart
Melissa Baker
Dr. and Mrs. Nicholas Bosch
Wil Cwikiel and Gail Gruenwald
Mr. and Mrs. Larry Levengood
Bonnie Wilson
Mr. and Mrs. Brad Wilkins
Doug Fuller and Martha Lancaster
Diane Dakins
Mr. and Mrs. Clark J. Smith
Kathleen Taylor and Gary Johnston
Susan Rose
Linda Badalucco
Kelly Kao
Bridget Waldvogel
Kristine Clark
Mr. and Mrs. Dudley W. Marvin
Jennifer McKay
Dr. Grenetta Thomassey
Ms. Lesley J. Pritchard
Sarah Yeganhe

Marilyn Weast Rorick

Alice Bryan and Barbara Bergin

Mary Jane McDonad Samberg

Sharon McDonald

Mary Jordan Ehlert

Ted Ehlert

Maura Brandi

Bridget and Grant Elowsky

Debbie Messer

John Messer

Honorariums

Allison Churnside, Happy Birthday
Elise Billingsley and Michael Fleming

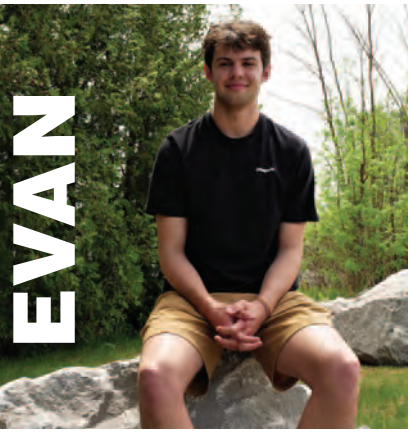
Lois Dean
Aaron Sheehan-Dean

Gail Gruenwald, for a job well done
Lesley Pritchard

Grenetta Thomassey, for a job well done
Lesley Pritchard

Share Your Love of Water

Give a personalized gift membership today. Not only does this unique gift idea help protect our waters, it will be enjoyed by your friends and loved ones throughout the whole year. To learn more about gift memberships, visit our website at **www.watershedcouncil.org/donate**.



Meet Our Summer Interns

The Watershed Council depends on our summer interns and seasonal employees to assist with our valuable monitoring and restoration work. This year, we have two interns and one seasonal employee joining our Watershed Protection Team. Please welcome them to the Watershed Council family!

Sophie Goodnough will be entering her junior year at Western Michigan University in Kalamazoo this fall. She's currently studying Freshwater Science and Sustainability. Her interest in all things water began when she studied ecology and invasive species in high school, which led her to research invasive carp in the Great Lakes. "The internship sounded like everything that I want to do: being outside, getting fieldwork experience, and adventuring," she told us in April as she was finishing up her sophomore year. "I can't wait." Goodnough likes to ski, kayak, read when she has time away from her studies, and take her Bernedoodle Mabel for long walks. She's a Michigander with lots of family in Petoskey, so she's sure to enjoy her time up north.

Evan Joneson will be starting his senior year at the University of Michigan with a major in the Program in the Environment and a minor in Earth Sciences this fall. He's also from Michigan and has spent many summers with family on Walloon Lake and Lake Michigan. Joneson is excited to supplement his passion for ecosystem science and conservation biology with practical field experience during his internship. "It's a great opportunity to conduct real life research and learn more about this area's ecosystems," he said. "I'm excited to be able to contribute to the state's water resources." He's enjoyed outdoor recreation his whole life and has spent many summers at Petoskey State Park and winters at Nub's Nob. He also loves boating and sports and enjoys hanging out with Evie, his family's Bernese mountain dog.

Seasonal employee **Hannah Snyder** will also be going into her junior year at Western Michigan University in Kalamazoo as a double major in Biology and Environmental Studies. She'll be working with our Mobile Boat Washing Station, blasting away the invasive species that threaten our waters. This will be her first time living in Northern Michigan, though she is a beach and water lover. Snyder first became interested in invasive species while studying at Olivet College when one of her professors took the time to point out how invasive plants interact with local ecologies. She's interested in a career as a marine or freshwater biologist, and she wouldn't pass up the opportunity to work with penguins in the future.

In Memory of Lindy Buffington

The Watershed Council family lost long-time staff member Lindy Buffington to illness this past winter. Lindy was a bright spot in all of our work lives. She always had a smile on her face and was willing to help anyone, no matter what was going on in her life or her workload. Her positive attitude and work ethic are rare and very much appreciated. Although she hadn't been able to come in to the office since the fall of 2019, she was willing to help out from afar. Everyone that has stepped in to this work has marveled at what she was able to accomplish.

Lindy started as a contract bookkeeper for us in 1990. As our need for her grew, she joined the staff full time in 2003. She created a system unique to us that continues to serve us well. Even though she served an administrative role, she cared deeply about our mission and supported the organization in any way she could, including as a 30-year member. She attended all of our events and was a willing and able spokesperson for our waters. Her shoes have been difficult to fill! We continue to miss her every day.

WEBINAR

Guide to Water Resources Permitting

If you missed our April 26 Guide to Water Resources Permitting webinar, don't despair! You can access it on our YouTube channel at www.bit.ly/waterpermit. Has a recent project occurred on your lake or in your community? If so, this webinar is for you. We encourage the public and lake associations to be involved when environmental decisions are being made that will affect them. Both state and federal regulations provide opportunities for the public to participate in regulatory processes. However, navigating through the various processes can often be overwhelming. To better understand permitting for water resources and how to effectively engage, our webinar offers important information to help you protect our lakes, rivers, and wetlands. It's also useful if you are planning a project and want to learn about the rules, regulations, and alternatives the Watershed Council recommends for projects with the potential to impact Northern Michigan waterways.

Tip of the Mitt Watershed Council
426 Bay Street
Petoskey, MI 49770

LIKE. WATCH. SHARE.

Non-Profit Org.
USPS Mktg. Mail
Petoskey, MI
Permit No. 108

ADDRESS SERVICE REQUESTED

PASS IT ON

WORTH SHARING!
When you're done reading it, don't throw it out.
Pass it on!

Little Traverse Bay Compost Giveaway

Tip of the Mitt Watershed Council and Emmet County Recycling have teamed up to offer free compost to Little Traverse Bay area residents. With funding from the Petoskey-Harbor Springs Area Community Foundation, Emmet County Recycling is giving away free buckets and bags of compost to 300 households in the area. Though the giveaway was on a short hiatus as of this writing, check out www.emmetrecycling.org to see if there are more free bags available this summer.

Emmet County compost is made from recovered food scraps and lawn waste. When these waste products break down, they form what is often called "black gold:" a soil conditioner that supports plant growth when applied to gardens or other plantings.

Using compost is easier on the environment than chemical fertilizer methods. When it rains, fertilizers applied to soils can wash into Northern Michigan water bodies. Excess nutrients in our lakes from fertilizers can lead to harmful algal blooms (HABS). Beloved family pets and livestock have died from drinking water from lakes contaminated with HABS in the U.S. Unfortunately, Northern Michigan lakes have begun experiencing HABs, making it more important to reduce fertilizer use.

Emmet County compost is part of Petoskey waterfront plantings. The City of Petoskey has used compost to feed native plants that stabilize vulnerable areas of Lake Michigan shoreline and demonstrate best management practices for lakefront properties. The city plans to plant deep-rooted native plants like fragrant sumac (which smells like citrus), prairie grass, and purple coneflower to protect Lake Michigan from stormwater pollution and erosion issues.

If free compost is still available, you can visit Emmet County Recycling at 7363 S. Pleasantview Rd. in Harbor Springs. See www.emmetrecycling.org for more details and operating hours. Bring five-gallon buckets to pick up your compost to reduce plastic waste. Grab your compost and be part of our soil building team while saving money and protecting our beautiful freshwater resources!