



A LOOK AT THE LAKE

THE NEWSLETTER OF THE BURT LAKE PRESERVATION ASSOCIATION

OCTOBER

2020

Line Five Revisited

Jim Burke, President

Back in 2013 BLPA started the conversation about Enbridge Line Five that runs through our backyard. Over the past seven years we've met with Enbridge, Homeland Security, the U.S. Coast Guard, local tribes, first responders and many other stakeholders to fully understand all aspects of Line Five as it relates to our watershed. In our October meeting your BLPA Board discussed and established a firm position on Enbridge Line Five.

BLPA Line Five Position Statement

Line Five is a 645-mile-long petroleum and natural gas pipeline owned and operated by Enbridge Energy, Limited Partnership. The Line runs from Superior, Wisconsin, across Michigan's upper peninsula, through northern lower Michigan, down to its terminus in Sarnia, Ontario. Line Five is 30 inches in diameter, except when crossing the Straits of Mackinac, where it divides into two 20-inch diameter lines. Line Five became operational in 1953 and carries 23 million gallons of light crude oil, synthetic crude, and natural gas per day.

In the Upper Peninsula, Line Five crosses 16 tributaries within nine miles of Lake Michigan. In the Northern Lower, it crosses the Indian River, Little Sturgeon River, Pigeon River, Upper Black River, and traverses near Burt, Mullett, and Douglas Lakes. These are all at risk from a Line Five rupture.

Enbridge employs several leak detection methods that include aerial patrols, line balancing calculations, and pressure and flow differential monitoring that can automatically shut the line down. Unfortunately, automatic detection technology isn't what it could be. According to Enbridge, a leak of 140,700 gallons per day could go undetected.

BLPA believes that quick leak detection and correction in our watershed is paramount to protection of the environment and our watershed. We believe that an undetected leak of 140,700 gallons per day is unacceptable. We believe that an oil spill in our waters cannot be sufficiently cleaned up. We believe that Enbridge must improve its ability to detect leaks and respond immediately. We believe that Line Five is capable of carrying natural gas products more safely than petroleum products, due to the nature of clean up capability and requirements.

As was demonstrated for several months in the summer of 2020, Line Five can be shut down with little or no measurable adverse impact to Michigan. Therefore, BLPA advocates for the shutdown of Line Five for petroleum products until leak detection technology and procedures are improved to an acceptable level.

While we may not all completely agree on what should be done about Line Five, your BLPA Board of Directors believes that this position best represents the sentiments and best interest of the majority of our membership, employing facts, sound science and pragmatism.

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Shoreline Upgrade

Don Chmielewski, Treasurer Burt Lake Springs Resort Association

We were experiencing moderate to accelerated erosion along most of our shoreline on the Colonial Point, northwest side of Burt Lake. Our shore was having significant erosion along most of its 326 linear feet. The likely causes were the wave energy generated along the extensive North and NNE fetches, 2.75 miles and 3.08 miles respectively, wakes of powerboats, ice shove, loss of shoreline vegetation, sandy soils, as well as natural shoreline processes. Here's how it changed from 30 years ago...



...to the present (Pre-revetment.)

So, what did we do? Our first step was to contact an expert on the subject, Jennifer Buchanan, Tip of the Mitt Watershed Council, Projects Director. Jennifer put us in touch with Tom Gallagher (Harbor Springs Excavating) and Janie Guliani (Natural ShoreScapes LLC), who worked with us on our options to address this erosion.

The purpose of this project was to stabilize our shoreline and protect water quality. Benefits will include a better shoreline aesthetic, erosion and sedimentation control and enhanced water quality and aquatic habitat of Burt Lake. The following alternatives were considered:

◆ **No Action-** The erosion will continue and likely worsen with time.

◆ **Seawall and Boat Well-** Sea walls and boat wells detract from aquatic habitat, are unattractive, require maintenance, are expensive, and can create local and systemic erosion and sedimentation problems. (Army Corps does not allow seawalls at all now.)

◆ **Boulder Riprap-** Large quarrystone or fieldstone boulders are often placed along the water's edge to control erosion. However, if not designed and installed carefully, they can actually be less effective than smaller rock and have a negative aesthetic effect.

◆ **Riprap Revetment-** Install a riprap revetment along the shoreline and plant deep-rooted native plants into the top and face of the slope and down into the revetment. - It is the most effective method for controlling erosion while allowing for recreational use and minimizing negative aesthetic impacts.

The **Riprap Revetment** was selected to stabilize the shore and enhance habitat. Excavation and revetment work was done in 20 to 50 foot sections, as described:

➤ Install turbidity curtain beyond revetment work area to contain any dislodged sediment. Leave installed until sediment has settled.

➤ Remove existing fieldstone and stage for reuse. Only clean fieldstone were reused. Cement chunks and other nonusable fill were staged on shore for onsite fill or disposal.





- Excavate the lake bottom to a maximum depth of 2.5 feet at 12 feet lakeward to match final 4:1 slope with shovel loader which moved at the base of the embankments parallel along the shoreline. Excavated material was staged on shore to be later used as fill for final grade or disposed onsite.
- Install nonwoven filter geotextile fabric over excavated area and cover with 2” – 6” sized cobble to a depth of 6 inches. Use shovel loader to accomplish with manual finish.
- Shovel loader then delivered rough place mixed size (6 inch – 24 inch) fieldstone to a final stone and cobble depth of 2.5 feet. Fieldstone was manually manipulated to achieve the final 4:1 slope. This rock holds the cobble layer in place, reduces the amount of wave energy that reaches the shoreline, and diverts ice up and over the revetment and final embankment.

Our project engineer, Janie Guiliani, obtained the necessary permits from the Department of Environmental Quality and the Army Corps of Engineers prior to the project initiation. We were approved to extend the revetment out 12 feet for 100 feet of the southern-most part because of more severe erosion, while the remaining extension of the revetment was 8 feet.

Work began in September of 2019, and continued through October and November. What did the project look like?

Are we satisfied with the results? You better believe it. Every time that wind howls out of the North or nNortheast, and those three footers pound the revetment we remember when our shoreline used to be disappearing into the lake, and now it isn't. Protected. Preserved. Secure. Our legacy for our children and other owners in the Association in the future.



Interested? Come and see. We welcome anyone to come and see what you can do to protect your shoreline from erosion. The water levels have been high all summer and will continue, so protecting your shoreline from erosion is a priority. As an Association we are so glad that we did this.



Zero Gravity Plant Survey

Michael Supernault, En-Land Chair

Once again, BLPA will be using the firm Zero Gravity to map Eurasian Watermilfoil in the southern end of Burt Lake. This survey will probably take place during June and July, 2021. This same area was mapped by drone in 2019. The survey will cover approximately 950 acres just north of Rotter Rd, on the west shore to the northern end of Seven Springs on the east.

The 2019 survey found the Watermilfoil less productive and covering less area in multiple locations, in comparison to earlier surveys. This may be due to several factors: cooler spring weather, higher water levels and chara out-competing the Eurasian Watermilfoil. Hopefully, once again we will receive positive results. It is part of our Mission Statement to protect the health of the lake and watershed. Surveys such as this one are critical to that end. Please notify us if you have questions or concerns.



Burt Lake Sturgeon Club

David Steenstra

Many of you remember the outstanding annual meeting we had last year with Captain Ken Clark. Ken conducts charters on our lake for many of our friends and neighbors. He's a world-class fisherman and usually finds the fish.

On Saturday, September 19 Ken picked up Paul and Emily Horvath, and Mike and Jennifer McGregor at the State Park for a six-hour charter. It didn't take long for the action to start. They were fishing for Walleyes. What a surprise when Paul hooked into this huge Sturgeon. It was 60 inches long and approximately 75 pounds. WOW! What a trophy. Of course, it was gently released and swam away as if nothing ever happened.

The next day, Sunday September 20, Ken was fishing with Andrew Hendrickson at the State Park. It didn't take long. Andrew hooked into a Sturgeon. It took 30 minutes to land this monster. 66 inches long, but very heavy. About 100 pounds.

This fish was also gently released. But before they let it go, they relieved this monster of two hitch-hikers that had attached themselves to this huge fish. We do have indigenous eels in Burt Lake. We plan to analyze these to see if they are invasive or indigenous. Either way, the monster Sturgeon is now "eel free".

The BLPA Sturgeon Club continues to be very optimistic about the native population of Sturgeon in our lake. We feel there are more than what some of the data may indicate. We will continue to share information as we gather it. Meanwhile, if you see a Sturgeon or catch one, please contact the BLPA office. We will follow up immediately.



BLPA Extraordinary Service Award



The first BLPA Extraordinary Service Award goes to local resident and Topinabee fireman Brian Wallace. Wallace was recognized for his selfless service to the community including in water rescues of multiple people in distress on Burt Lake.



Senior Voyageurs

Tom Prout



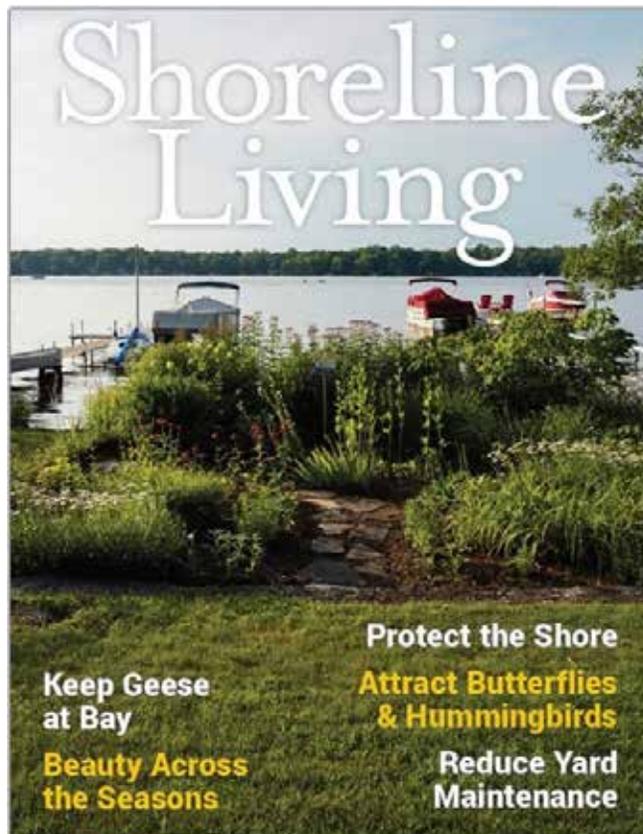
Someday you may look out onto the lake and see two enormous canoes – 36 feet each – packed with people using unique and colorful paddles. It’s not your imagination. Every year the Leelanau School senior class embarks on the annual Voyageur Trip – working together to navigate a nearly 30 mile inland waterway journey in those 36 foot canoes.

They start at the Crooked Lake boat launch north of Petoskey and paddle to Burt Lake where they stop to rest and have lunch at the State Park. Then they pack up, clean up, and paddle on to Mullet Lake. And the paddles? The seniors learn how to make them in the beginning of the year and are free to personalize them.

The School believes this senior project teaches communication, teamwork, resilience, and the value of hard work – all important life skills. Congratulations to each senior, and thanks for visiting our beautiful lake. We hope you all come back.



Shoreline Living



We thought you’d like to know about a comprehensive new guide to owning, managing and enjoying lakefront property. This 28 page document, published by the Midwest Glacial Lakes Partnership, describes a host of practices for balancing property owners’ needs with what is best for the lake. It tells the stories of five lakeshore property owners who have all taken different approaches with their shorelines. The projects undertaken by these property owners range from relatively minor plantings and natural shoreline rehabilitation to more intensive natural landscaping and full protection.

If this is the year you’ll have more time available for your shoreline, hopefully this book will offer some inspiration. You can find it at www.midwestglaciallakes.org/resources/shorelineliving/



Up North

By Michael and Peg Supernault

In many ways, this summer was radically different from one we imagined a year ago. Yet, in other ways, it was quite the same. We are so thankful to live in an area that offers so many opportunities to escape to the outdoors—lakes for fishing, swimming, or boating, rivers to fish or paddle and miles of trails to hike. The natural world which is always just outside our door presents us great beauty—but also a setting to improve our mental and physical health as well as a prime location for relaxation.

At the end of the summer we could say that it was a good summer, even if less eventful than usual. We are sure that this is true for many of you, also. We were able to discover (or re-discover) some of the beauty and solitude of the watershed. We used the trail map from Little Traverse Conservancy as a favorite resource. We hope you found some new and wonderful places to explore, too.

Although early June was cool, wet, and often windy, it still brought many interesting and enjoyable moments. Early in the month, we slept to a Whip-poor-will's lullaby and woke to the very loud call of a Scarlet Tanager just out our window. Later that same day, Michael encountered a Wood Duck baby in our garden area. The duckling rapidly scrambled through the fence and underbrush. After a long tumbling, tripping, headlong journey, it finally reached the safety of the river, and bobbed away. June warmed, and we were able to spend a great deal of time on Burt Lake, typically at the North End. The heat of July made us appreciate the cool clear lake even more. Nesting birds are noticeably quiet, so we heard little vocalization from parent birds. Soon, however, the air was filled with “Feed me!” screeches from the young of multiple species. During several consecutive evenings, we heard the disquieting scream of a bobcat. Although the species is not much larger than a domestic cat, the sound is exceptionally large.

In late June, Michael had his first opportunity to teach a little –something he has missed deeply. A friend brought her young relatives to our house to examine and discuss rocks and fossils. A few days later, they brought their found specimens back to discuss and identify. It is unclear who enjoyed this time more—Michael or the youngsters. In late July, we had an opportunity to add scientific research to our resume. A former

student (Caleb Putnam) is an expert ornithologist and is concerned about the declining population of black terns. In the past, we have a colony of them in the spreads area, so we cruised down the Indian River looking for them. We found 25 adults and juveniles, which was reassuring to Caleb. We also found some wild rice plants, which were once quite common in marshy areas, and are being re-introduced.

Careful observation always yields results. It may be something as simple as watching a hummingbird be frightened away from a feeder by a bee, or seeing a kingfisher scoop up minnows for the kids' lunch back at the nest. Occasionally, it is a little more dramatic. We watched seven deer standing in the river on a sandbar. They drank, and the adults stood patiently as the young splashed and pranced in the shallows.



Late August found Michael roughing in a trail on the LTC Bair property along the Sturgeon River at the edge of Indian River. There are hopes of it being used by students attending the nearby schools for observation and research. Even though it is a small area, it has diverse populations of plants and animals.



Up North continued A recent trip up the Crooked River (one of our favorite fall activities) yielded vibrant foliage and sightings of multiple loons on Burt Lake. We are so fortunate to live in such a pristine area that loons use it as a migratory stop-over. It is a real testament to the health of our lake that loons also nest here.

Late in September, as bucks snort and small packs of coyotes howl near dawn, there are remnants of summer bird species about. A few Robins, a flicker or two, and at least three Bluebirds join bands of Chipping Sparrows in the garden. They hunt for seeds, worms, or insects. A lone Yellow throated Vireo calls—a weak version of its spring song. Small bands of White-throated Sparrows scurry along the ground, making the taller weeds shiver at their passing.

The trees atop White Road hill slowly begin to wear red and orange—a preview of the display that will soon appear out our windows. A few swamp maples in the lowlands are brilliant crimson. The riverbanks are dotted with goldenrod, Black-eyed Susan, and bright red sumac.

As we write this, we are puzzled that summer has ended. We have the same reaction every year, although we DO

understand the passage of time! Even in the present circumstances, it passed quickly. Hopefully, you (and we) are staying engaged, positive, and inquisitive. Take the time to enjoy our beautiful area. It is likely that as you read this, peak color has passed. A few hearty goldenrods and asters will still be blooming, and fields gradually will assume many shades of brown.

Soon all will have a coat of pure, white snow. As we look forward to the coming season, we wonder what winter will bring...what birds? what mammals? what fun? Once again it will be time for skiing, snowshoeing, hiking, ice fishing and raft trips down the Sturgeon. There will be days with a good book and a warm fire. Days to marvel at the beauty which surrounds us. We will have time to enjoy what we have, and plan for what is to come. We will take note of how all are pieces, and fit into a large interrelated puzzle. How each organism (whether it be a magnificent bull elk or a carrion-eating insect) is an important part of our world. Although as Aldo Leopold stated, "One of the penalties of an ecological education is that one lives alone in a world of words."

Enjoy your time on this planet. Help the next generation enjoy, protect and enhance that which we were lent.



Linda Roberts



Burt Lake Trail: Phase III Approved

Gene Hodulik, Chairman, Trail Committee

Eight years ago the Burt Lake Trail began with the construction of 5.1 miles of Phase I. This was made possible by generous contributions of members and neighbors, who took advantage of a large matching fund grant from BLPA to provide the necessary match to obtain two large grants from the Michigan Natural Resources Trust Fund (MNRTF) and MDOT Transportation Enhancement Fund. In spite of some vocal resistance, the Trail Committee pursued the goal of a safer, off-road trail for bikers, walkers, and runners. A new Trail Committee picked up from that point in 2013 and defined the additional four phases. Three of those phases have been completed.

Today the continuous trail cruises over seven miles from Maple Bay Road to East Burt Lake Road/Riggsville Rd with the completion of Phase II. This section is a beautiful, 1.83 miles long, 10 foot wide paved trail through the UM Biological Center property. Just completed in May, it was financed again just like Phase I, obtaining grants from the Trust Fund and MDOT/TAP and matching fund donations from neighbors and organizations. The committee is grateful for the work of Karie Slavik, UM Assistant Director at the Biological Center, for obtaining the easement from UM through the Biological Center property. The trail runs through the “Gorge” where beautiful trails make for an exciting side trip.

Phase III “ conditional commitments” have been obtained for construction next year, with two large state grants. This phase will continue along East Burt Lake Road as an off road, paved 10 foot trail through the UM Biological Center property to meet up with Phase IV just completed in August.

The committee will be raising funds to help fund Phase III of the trail. A grant from MEDC has been approved for \$30,000 but match funds from the community must be raised in order to receive the grant. Thanks to the BLPA for their \$10,000 donation to get us started. Watch for an announcement on social media, direct mail, or email. Donations are very much needed to connect the two sections completed this summer. This will make a continuous trail, over ten miles long, from Maple Bay, through U of M property, all the way past Hoppies to the corner of Topinabee Mail Route and Burt-Mullett Roads.

Phase IV, East Burt Lake Road, with over 50 homes in a 1.5 mile stretch, has just been re-constructed with five



foot paved shoulders from Birchwood Road to Hoppies Restaurant. Phase V, Mullett-Burt Road, from Hoppies east 1.5 miles, was reconstructed with 5 foot shoulders in 2017. These phases were completed partnering with Brent Shank, Manager/Engineer of the Cheboygan County Road Commission.

Donations can be mailed to Top of Michigan Trails Council, (a 501C), 1687 M 119, Petoskey, Mi 49770. Designate your donation to “Burt Lake Trail” or visit www.trailscouncil.org and choose Burt Lake Trail for a donation.

Editor’s note: The Author and two former chairmen of the trail committee, Gary Street and Steve Vorenkamp, along with Margie Reh, all deserve special thanks for their dedication and hard work to make the Trail a heavily used and greatly appreciated reality.



BLPA Contributes Rescue Boat

Chris Kindsvatter

The BLPA made a \$13,000 contribution to the Topinabee Fire Department (TFD) in August to purchase a rescue boat to be used only on Burt Lake for water/boating rescues and boat fires. This Burt Lake dedicated boat is to be immediately available for all area first responders and will be moored on Burt Lake at a member's dock in the geographic center on the east side. It will remain on the lake from when ice melts until ice forms.. This need is the result of at least eight incidents per year on the lake with many of those occurring before docks/boats are in the water requiring precious time of first responders searching for a boat and motor to be used in the rescue. The boat will also have on board a water fire suppression pump for boat fires. This is another positive action of BLPA to respond to boating safety on Burt Lake. TFD is also now working with Mullett Lake Area Preservation Society (MAPS) for a similar Mullett Lake dedicated boat.



TFD representatives and BLPA Rescue Boat Committee members (L to R) Chris Kindsvatter, Jim Burke, Brian Wallace (TFD Lieutenant), David Steenstra, Charles Gano, Mike English (TFD Chief).



Saved by a Lifejacket

Jess Miler, Kayaking Enthusiast

Having acquired 20 years kayaking experience, some might find it surprising that I always wear a life-jacket. The Michigan law only requires that you carry a life jacket, but I have always chosen to wear it, maybe just out of habit. The day came when I was very glad I did.

The water was like glass. The winds were nonexistent. I decided to go out on the lake before eating breakfast, so as not to miss the tranquil conditions. After thoroughly enjoying the first 1.5 miles of my journey, I headed for home. The next thing I knew, I blacked out. Falling into the cold 60 degree water of Burt Lake in Spring. That awakened me immediately, and I struggled to find the surface of the water, and to extricate myself from my 17 foot sea kayak. I thought to myself, if I die of hypothermia or drowning, at least I am doing exactly what I want to do as I say my goodbyes. But then I realized,

I wasn't going to drown. My life jacket was supporting me. Within a few seconds I heard the welcoming sounds of human voices. My quick witted and fast acting neighbor, Bruce Brown, was already in the water reassuring me that I was going to be all right. His wife, Melissa, immediately called 911. Paramedics arrived by the time Bruce got me to shore. They did an EKG and checked all my vitals including blood pressure, blood sugar and pulse. They could not find anything wrong.

My doctor says a sudden black-out like the one I experienced can be the result of low blood pressure combined with stress or medication or lack of eating. This is called a vasovagal attack. After examining me thoroughly, my doctor assured me that I am indeed quite healthy, as is further evidenced by a recent echocardiogram, but he certainly encouraged me to continue to wear a life jacket, just in case. I hope you will too.



Burt Lake Water Level

Kathryn Hofmeister, College of Forest Resources and Environmental Sciences, Michigan Technological University and Alitzel Villanueva, Program in Environmental Studies, Middlebury College

Have you ever noticed or wondered about what controls the water level of Burt Lake or Lake Michigan or Huron?

Great Lakes water levels generally rise and fall on century and multi-decade long cycles. Shorter term fluctuations can occur throughout a year due to seasonal precipitation patterns, evaporation, and runoff from the surrounding watersheds. Changes in land cover and water control structures on rivers, such as dams, can also influence water levels. While fluctuations in water level over time are natural and have always occurred, the recent rapid transitions between low and high, like the low water levels in 2013-2014 to the record-breaking high levels in 2019, are a shift from past patterns and are partially a result of shifts in temperature and precipitation patterns due to climate change.

Water levels in inland lakes are influenced mainly by three factors: rain and snowfall, evaporation from the lakes, and runoff that enters the lake from the surrounding land through streams and rivers. Precipitation that falls on the land also eventually makes its way to lakes as groundwater, which is an important source of water to lakes in northern Michigan, including Burt Lake and Douglas Lake.

Has any of this been measured for Burt Lake?

No, not for Burt Lake specifically, but it has been for Douglas Lake. We used Douglas Lake water level measurements taken since 1922, ice in and out dates, and weather data to delve into questions about the drivers of long term and seasonal lake level fluctuations of inland lakes in this region. While there is not the same long-term dataset for Burt Lake, we felt that Douglas Lake measurements and patterns are reasonable approximations for Burt Lake water levels.

Douglas Lake levels fluctuate over 1.5 ft from the highest to lowest water levels during the year. Large storms can raise the lake level slightly, often just an inch or two, but the impact depends on how wet things have been and how much rain falls. This pattern is consistent throughout the entire 100 years of lake level observations. Longer term periods of high and low water levels are influenced by multi-year precipitation patterns and the duration of ice cover. Lake levels are high when the regional groundwater table is high

because groundwater inputs are an important source of water to rivers feeding the lakes and upwelling directly into the lakes. Years with shorter periods of ice cover, and therefore more time for evaporation, generally have lower lake levels. These environmental factors also affect Burt Lake levels in similar ways.

Are there any additional factors that might influence Burt Lake water levels?

While meteorological drivers are primary influences on Douglas and Burt Lake water levels, the Cheboygan Dam also affects water levels along the Inland Waterway (Mullett, Burt, Crooked, Pickerel Lakes). In 1934, the Cheboygan Board of Supervisors passed a resolution establishing target water levels for the outflow of Mullett Lake into the Cheboygan River to maintain water levels in the lake and the river for navigation. The Cheboygan Dam operators use continuous measurements of water levels along with weather forecasts to make decisions about how much water to release in an effort to always meet the set targets. Changes at the dam have the most direct impact on the amount of water in the Cheboygan River and water level changes in the river happen within hours of changes at the dam. However, these day-to-day adjustments have little, if any, effect on Mullett and Burt Lake levels. The lakes have so much more water than is flowing through the rivers that they are insulated to small changes in water levels at the dam. Additionally, Burt Lake sits 12 inches higher in elevation than Mullett Lake – this elevation gradient difference is what allows for water to flow in Indian River between the lakes – so while Mullett Lake levels are held at the set target, Burt Lake levels can drop due to dry conditions in the region, even so low as to reduce flow in Indian River, without any changes to Mullett Lake levels. Short term changes in water levels around the lakes are due much more to the wind direction and strength. In fact, with a 5-10 mi/hour NW wind water levels on the east side of Mullett Lake may be raised by 6 inches, while on the west side water levels will have dropped and the same is true for Burt Lake.

There is a seasonal lowering of water levels along the Inland Waterway beginning in the middle of October to create capacity in the lakes for spring snowmelt. During this time, the set target level of Mullett Lake lowers by 1 foot and more water is released over the dam. Mullett Lake responds first to this lowering of water



levels for winter, followed by slight decreases in Burt, Crooked, and Pickerel Lakes. Meeting this water level target is often challenging because fall precipitation and winter thaws add more water to the lakes through precipitation, runoff, and groundwater than is flowing out through the Cheboygan River. Changes to water flowing over the Cheboygan Dam primarily influence the amount of water in the Cheboygan River and Mullet Lake, although seasonal drawdown of water can lower Burt Lake levels by a couple of inches during the winter.

What if I have other questions about lake levels or water movement in the region?

Additional water level measurements would help improve our understanding of Burt Lake patterns, so if you are interested in taking those measurements, let us know. Please feel free to reach out to Katy Hofmeister (klhofmei@mtu.edu) or Adam Schubel (aschubel@umich.edu) at UMBS with any additional questions.

Algae Bloom in Black Lake

On September 15 the District Health Department #4 issued a public health awareness bulletin about an algae bloom in Black Lake near Onaway. Following are excerpts from it:

How dangerous are Harmful Algae Blooms?

If you touch HABs, swallow water with HAB toxins, or breathe in water droplets, you could get a rash, have an allergic reaction, get a stomach ache, or feel dizzy or light-headed, depending on the amount and type of exposure. HABs can also cause illness in pets.

What causes HABs to form?

Some factors that can contribute to HABs include sunlight; low-water or low-flow conditions; calm water; warmer temperatures; and excess nutrients (phosphorus or nitrogen). The primary sources of nutrient pollution are runoff of fertilizers, animal manure, sewage treatment plant discharges, storm water runoff, car and power plant emissions, and failing septic tanks. The only thing we can control is excess nutrients.

The Big Three Excess Nutrients

So far Burt Lake has been spared this pestilence. Now it's more important than ever to take corrective actions against the Big Three Excess Nutrients: Fertilizer, storm water runoff and failing septic tanks. It's easy to help. Just use less fertilizer, schedule septic system maintenance and grow a greenbelt. Thanks for helping insure we don't get a Burt Lake health warning. More information is available at www.michigan.gov/habs

New Members

Bahmer, Joseph & Susan - Mentor, OH
Bataran, Steve & Sally - Indian River
Boatin, Herm - Indian River
Brown, Daniel & Patricia - Indian River
Buskirk, Angelina & Ben Blumke - Alanson
Chapman, Deb - Indian River
Coulter, Curt & Jerilynn - Indian River
Cowhy, Jim & Gwen - Manchester,
Cramton-Beat, Kelly - Holland
Diedrich, John & Pat - Petoskey
DiGia, Deborah & Richard - Farmington Hills
Durfee, Mary Beth - Ottawa Hills, OH
Eagleson, Dave - Huntington Beach, CA
Eberly, Leian and Kialeigh - Brutus
English, Mike - Cheboygan
Fischer, W. Gray - Cheboygan
Forsmark, Scott - Cheboygan
Gadowski, Jerry & Sharon - Petoskey
Garlinghouse, Bill & Mary Yocum - Brutus
Grundey, Jeff & Kathy - Pickerington, OH
Harrington, Michael & Michelle - Petoskey
Hebert D.C., Douglas - Indian River
Hodson, Julie - Indian River
Kaper, Robert & Marla - Burt Lake
Lynch, Jill - Cheboygan
Maloney, Tom - Lansing
McHenry, Bill & Molly - Farmington
Moutrie, Kristina - Indian River
Muir, Richard - Macomb
Orthosport Physical Therapy - Indian River
Pedersen, James & Sherry McLain - Charlotte, NC
Perla, Donna - Arlington, VA
Petroelje, Gwen - Alanson
Roughton, Steve & Heather Chambers - Alanson
Schultz, Steve - Indian River
Schwalm, Darrell - Staunton, VA
Skutnick, Kristen & Jeff - Detroit
Van Berkom, Trevor & Joanne - Perrysburg, OH
Van Reesema, Frederik & Marelvi - Chelsea
Van Reesema, Bryan & Jamie - Virginia Beach, VA
Vanantwerp, Joe - Cheboygan
VanDaele, Jennifer & Pat - Alanson
Wallace, Brian - Indian River
Webb, Jeff & Dawn - Indian River
Wiltsie, Dianne & Jeff - Delphos, OH
Zimmer, Bob - Indian River



Burt Lake Preservation Association
P.O. Box 632
Indian River, MI 49749

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With a summer like no other the one constant was our lake.



Visit www.blpa.org or [facebook.com/burt lake preservation association](https://facebook.com/burt.lake.preservation.association).