

Bass Lakes Area Environmental Partnership

19 July 2025

- Commence: 1015
- Adjourn: 1120
- Location: 8449 W. Lisaius Ln, Irons, MI 49644
- Attendees:
 - Board Members Present
 - President: Lisa Adams
 - Vice-President: Tom Shear
 - Secretary: Heidi Haskins
 - Treasurer: Barb Seiler
 - Director: Linda Irmscher
 - Director: Laura McKay
 - Guest Speaker: Emily Fredricks, Invasive Species Technician, North Country Cisma
 - Public Attendees: 14
- Agenda:
 - Greeting and board member intros
 - Housekeeping
 - CLMP results and what these data mean
 - Overview of previous year's summer topics
 - Guest speaker: Emily Fredricks - DASH diver
 - Raffle drawing

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- Prizes to be raffled off:
 - Gift baskets from Gilberts Carpets Plus, Orchard Market and LOSB
 - \$500 worth of gift cards from local restaurants and businesses
 - \$350 gift certificate from Ludington Dock & Hoist
 - Beautiful homemade quilt from Marcia Hawks
 - 16"x20" loon photo print on canvas from Amanda VandenBerg
 - Wind spinner from Just Bargains
 - Rustic artwork from Ruth Heim
 - Pottery, Pendleton wool blanket and a vintage Munising bowl from Laura McKay
 - Natahka t-shirt and license plate
- Bass Lakes AEP Board of Directors:
 - Tom Shear – VP
 - Barb Seiler – Treasurer
 - Heidi Haskins – Secretary
 - Linda Irmscher & Laura McKay – Directors
- Housekeeping:
 - Refreshments available, please help yourself
 - Bathroom in house
 - Donations – cash, check, QR code, or our website
 - Raffle will be at the end of the meeting so stick around for some awesome prizes!
 - Thank our sponsors: The Boat House, Cole Insurance, Sweetfern Café & Emporium, Riggs Landscaping & Excavating

- Continued support via donations still necessary to continue DASH operations. Bare minimum operating expenses annually (liability insurance, physical boat insurance, expendable supplies, boat maintenance) are in excess of \$5000 annually. Additional funding sources are continually applied for, but award is not guaranteed, so donations are needed to keep DASH going.
- CLMP
 - The Cooperative Lakes Monitoring Program is run through the Michigan Clean Water Corps (MiCorps) that was created through a 2003 Michigan Executive Order to assist EGLE in collecting and sharing water quality data for use in water resources management and protection programs
 - MiCorps is administered by Michigan State University Extension under the direction of EGLE and in partnership with the Huron River Watershed Council and Michigan Lakes and Streams Association
 - BBL has participated in CLMP every year since 2019, LBL since 2021
 - Parameters measured are:
 - Water clarity
 - Spring and summer phosphorus
 - Dissolved O2 and temp
 - Chlorophyll
 - Invasive plant survey
 - Score the Shore
 - 2024 CLMP reports for both Little and Big Bass Lakes on our website and links to each report are included in the 2024 Annual Report
 - Thank you to the fantastic CLMP citizen scientist volunteers: Tom Shear & Heidi Haskins, Jeanne Kavanagh & Bert Merriman, and Laura McKay.
 - Would anyone who would like to volunteer? If so, please contact Bass Lakes AEP
 - 2024 Big Bass Lake CLMP report overview
 - Big Bass Lake is oligotrophic leaning toward mesotrophic

- 3 categories of lake types: Oligotrophic means the water is clear with low nutrient pollution (N₂ and P overwhelmingly from fertilizers) with some plants and little algae. They can support cold-water fish species such as bass, bluegill, crappie, northern pike, perch, and walleye
- Mesotrophic means water is somewhat murky or cloudy with moderate levels of N₂ and P nutrient pollution, average amounts of plants and increased algae amounts. They can support diverse fish populations, but the ability to sustain cold-water fish hinges on factors like depth and the maintenance of DO
- Eutrophic means the water is murky and nutrient-rich with lots of plants and algae. Decomposition of organic matter consumes O₂ leading to O₂ depletion
- In 2019, BBL was rated as an oligotrophic (clear) lake
- In BBL, some DO is present in the bottom waters in early summer, but is devoid of O₂ by late summer.
- When the fishing is bad, one reason may be loss of DO due to too much fertilizer getting in water and/or dead plant decomposition (dead milfoil from herbicide)
- Currently the only invasive species identified as present in the lake is milfoil
- Score the Shore was conducted in 2022: score was 65 of 100; state average is 73 of 100. We will repeat Score the Shore in 2027
- 2024 Little Bass Lake CLMP report overview
 - Little Bass Lake is oligotrophic leaning toward mesotrophic
 - In 2021, LBL was more oligotrophic than mesotrophic.
 - However, Little Bass Lake holds DO all summer. The lake does not stratify following typical pattern of most lakes. DO is high in the thermocline, most likely due to algae generating oxygen in the thermocline. Little Bass Lake does support the Cisco fish, can support cold-water fish.
 - Cisco are a small silvery fish related to Lake Whitefish and spend most of the year in deep cold water. This makes them especially susceptible to longer hotter summers that we are experiencing and susceptible to increases in nutrient pollution from fertilizers and leaking septic systems. Of the 11,000 lakes in MI, only 115 are currently known or suspected to contain Cisco. LBL is among the 1% of MI inland lakes that supports Cisco

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- There is a goal to keep herbicides from being introduced into Little Bass Lake in order to preserve cold water fish habitat, specifically in support of the Cisco fish.
- Milfoil is the only identified invasive species in Little Bass Lake.
- Score the Shore was conducted in 2022: score was 76.1 of 100; state average is 73 of 100.
- Prior year topic review:
 - 2020 there was no meeting due to Covid
 - 2021 was the year of the septic. Unfortunately, all information was disseminated via email and our website. Because of Covid, we did not have a guest speaker
 - 2022 was the year of the shoreline. Jerry Kass from the National Resource Conservation Service and Mason-Lake Conservation District was the guest speaker. Presentation discussed natural shoreline options, resources for natural shoreline projects, restoration contractor options were discussed
 - 2023 was the year of hand-pulling milfoil in front of your house/cottage. Our guest speaker was Erick Elgin, an aquatic ecologist and water resource educator from MSU Extension. Erick talked about long-term management of lakes:
 - preserve the invertebrate population,
 - keep fertilizers (P and N₂) on the land and not in the lake,
 - keep sediment out of the lake,
 - keep the shoreline habitat healthy because near shore habitat is critical to entire lake ecosystem
 - Erick also did a plant identification and milfoil hand-pulling demo
 - 2024 was the year of “fish sticks” – Installing Wood Habitat as a way to add structure to the littoral zone (or near shore habitat). Our guest speaker was Craig Kivi, President of Shorelines Forever a 501c3 nonprofit that is purchasing properties and preserving or restoring natural shorelines and protecting them forever.
 - A quote from their website: “Some homeowners want their waterfronts to look like swimming pool lakes. An unobstructed view of the lake, crisp blue water surface and nothing else. The only problem is, a healthy lake looks nothing like a swimming pool lake.”

- 2025 is the year of DASH – guest speaker is Emily Fredricks, an experienced DASH diver
- DASH boat purchased late summer of 2024. 2024 one familiarization dive completed. 2025 operations have been focused on training, execution and technique improvement, boat and equipment upgrades to streamline operations and improve efficiency.
- Emily Fredricks, Invasive Species Technician, North Country CISMA
 - Emily Fredricks Introduction and short biography
 - Emily grew up in Byron Center, MI
 - Bachelors in Environmental and Sustainability Studies with a minor in hospitality and tourism management from Grand Valley State University
 - Currently employed at the North Country CISMA
 - Previously employed by Americorps at the Squam lakes Society in NH and the GVSU Sustainable Agriculture Project
 - Hobbies include: hiking, water related sports, reading, and teaching, herself computer languages
 - Presentation
 - Started DASHing about 18 months ago in New Hampshire. Her first position on the DASH team was as a “weed watcher” in a kayak. DASH focused on variable milfoil, described as Eurasian Water Milfoil’s (EWM) “bushy cousin.”
 - In New Hampshire DASH is a state managed program. DASH was an approved mitigation technique for EWM, variable milfoil and curly-leaf pond weed.
 - In Michigan, lake associations/riparians are responsible for management. Herbicide is most common technique because it’s considered quick and easy. DASH is more selective and does not introduce biomass into the water where decay consumes dissolved oxygen.
 - After being a “weed watcher,” Emily moved onto the DASH boat and served all positions
 - diver, topside tender/skimmer and, topside boat operator/sorting table.
 - most efficient operations included 1-2 divers in the water; a diver tender in a kayak monitoring the diver and collecting stray plant fragments; topside sorter/processing of DASH effluent

- as the DASH season progresses, the plants become much more fragile and fragment easily which is one of the reproductive methods of the plant (each fragment can become a new plant)
 - milfoil infestations tend to grow rapidly around boats because prop action facilitates a self-perpetuating, rapid growth cycle
 - benefits of DASH: community engagement, education and familiarization of plants species, etc
 - on Big Bass Lake EWM has been genotyped as hybridized with native milfoil. So, herbicide treatment must be broadspectrum to be effective, which impacts native plants as well.
 - Little Bass Lake milfoil samples will be genotyped this summer, with results anticipated sometime this winter
 - DASH allows for more selective mitigation technique that has less impact on native vegetation and is a lot less harmful overall.
 - with DASH dissolved oxygen is not negatively impacted because plants are removed so there is no biomass left in the water to decay and consume dissolved oxygen in the decomposition process. This also supports minimizing impact to micro invertebrate and fish habitats, and contributes to keeping the food web in place.
 - continuous DASH leads to near-eradication and effective mitigation of EWM
- Q & A:
- What was the difference between the lake in New Hampshire you dove, and when you dove on Little Bass Lake?
 - The lake bottom. On Little Bass Lake the bottom is very, very soft which makes it easy to remove the milfoil, but very difficult to get into proper position to pull the milfoil. Because it's so soft and the slope is very steep it is very difficult to get into and maintain proper position to pull the milfoil.
 - (audience member comment) In New Hampshire you sorted the milfoil on the boat. Here, based on the bags of milfoil sorted after the initial DASH pilot study on Big Bass Lake, the material collected contained very little to no native plants. The only non-invasive material found in the collected material was an apple core discarded from the boat operator and chinese mystery snails.

- (audience member comment) Noting the sponsors listed for the organization and operations, all of them are some of the very small businesses in the area and not representative of some of the more prominent businesses in the area.
- What is the rate of reduction of milfoil in the lakes?
 - Big Bass Lake: unknown, information would need to be requested from PLM
 - Little Bass Lake: anecdotal information from resident is that in 2018 milfoil was present in a handful of patches, primarily on the north end of the lake. Now, nearly the entire perimeter of the lake has prominent patches of milfoil with the exception of the southeast side of the lake (most likely due to permitted herbicide application)
- (audience member comment) in the state of Michigan riparians have the responsibility to manage the lake, it's not a state managed program
- Tom Shear provided a milfoil sample show and tell.
- Audience member noted that last year they had milfoil at the end of their dock, and by end of summer it was gone. Why?
 - Lisa has asked that question to technical professionals and at the Michigan Lakes and Streams Association, and it is unknown why in some places milfoil disappears for a periods of time.
- (audience member comment) If you see a piece of milfoil while you're out on your boat, fish it out of the water and throw it away...every little bit helps to keep milfoil from spreading.
- Audience member commented that they had put a barrier down over the milfoil and it was eliminated.
 - This process is referred to as a benthic mat. Emily discussed that benthic mats are not one of the currently recommended techniques of mitigation because of the indiscriminate nature of the device, since invasive and native plants are killed, but the established seed bed is not. So, one of the first plants to re-grow in the area is the milfoil via the established seed bed. Some work is being done regarding the transplant of native vegetation into the area impacted by the benthic mat, but little success in native transplant has been observed.

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- Benthic mat options are still being investigated with the scientific community for Little Bass Lake because of the monoculture type of milfoil beds, which make Little Bass Lake a good candidate for the project and native plant transplant technique development.
- Emily commented that DASH is also being explored in other states as a method of controlling or eradicating European frog bit, another aquatic invasive plant.
- Audience member commented to call your state representative if you have concerns about DASH being classified as “dredging.”
- Is there anything we can do to clean up the lake? (question was in reference to lake clarity)
 - primary cause of lake clarity decline is increased algae. Algae increases are typically caused by increased nutrients in the water (typically from fertilizers and leaking septs). Therefore, the most effective method of reducing algae, and improving water clarity, is by eliminating introduction of fertilizers and leaking septs into the lake.
 - Additionally, how we use the lake contributes. For example stirring up sediment from wake boats in shallow water and nearshore, and jet skis going through shallow areas of lake at speed. If those actions were avoided, their impact on water clarity would be reduced.
- Raffle drawings and prize distribution complete.