Bass Lakes Area Environmental Partnership

2021 Annual Report

Bass
Lakes
Area
Environmental
Partnership

A 501(c)3 nonprofit organization

March: The Beginning

The Bass Lakes Area Environmental Partnership (Bass Lakes AEP), a 501(c)3 organization, was created in March 2021

Our Mission:

Our mission is to promote public awareness, forge partnerships among citizens, scientists, and professionals, and foster the protection of the lakes' ecosystems for today and for generations to come.

About Us:

The Bass Lakes Area Environmental Partnership was created in 2021 by riparians from Big Bass and Little Bass Lakes in Irons, Michigan committed to education and the control and prevention of aquatic invasive species through innovation and cutting-edge science. Designation as a 501(c)3 organization enables us to apply for grants and solicit donations for financial resources to meet our mission. We are starting out small, but hope to expand in the future to include other waters within our watershed.

The founding principles of the Bass Lakes Area Environmental Partnership are:

- Providing education about the lake and shoreline ecosystems
- Preventing and combatting the spread of invasive species in the lake and shoreline ecosystems
- Soliciting grants and donations in order to take actions to prevent the spread of invasive species and to pay for educational program
- Other charitable efforts related to lake and shoreline ecosystem health in the area

Board of Directors:

President: Lisa Adams
Vice President: Tom Shear
Secretary: Heidi Haskins
Treasurer: Ruthanne Gilbert
Directors: Jeanne Kavanagh and Linda Irmscher
(Many thanks to exiting Director Colleen Howes for helping create our 501(c)3 organization!)

Committees:

Fishing and Fish Habitat Improvement: Tom Stinson

If you would like to receive timely updates on our activities, please send your name and email address to BassLakes.aep@yahoo.com

June: DASH on BBL

DASH (Diver Assisted Suction Harvest) was performed on a large patch of Eurasian Watermilfoil (milfoil) in Big Bass Lake (BBL) in June 2021

For those not familiar with milfoil, here are a couple of photos.

50 lb onion bags were used to capture the milfoil for disposal.

A total of 159 bags were filled and removed from BBL.

If you were on BBL last June, you may have seen a line of yellow floats (similar to this photo) that were the top part of turbidity curtains.

The turbidity curtains are held on top of the water by the yellow floats and on the bottom of the lake by anchoring weights.

They prevent the spread of milfoil by stopping fragments from floating away. They also prevent the lake bottom sediment from spreading beyond the DASH site.

MTT-DASH DIVERS
NATURAL LAKE RESTORATION
(989)313-1088

Phase 2 of this DASH project was paid for through grants from the Laird Norton Family Foundation, Trout Unlimited and private donations.

The 2021 DASH Report can be found on our webpage:

DASH Report 2021

July: AIS Blitz

Boaters and other recreators learn about the risks of spreading aquatic invasive species (AIS) at public and private boating access sites across the Great Lakes region every summer. The Great Lakes AIS "Landing Blitz" events take place over a two-week period, emphasizing the need to **Clean, Drain, Dry** boats whenever they come out of the water, and **Dispose** of any unwanted bait in the trash.

The AIS Blitz was held at the BBL Boat Launch on July 2nd this year.

Local volunteers partnered with state and provincial agencies to deliver consistent messaging about preventing the introduction and spread of AIS from the movement of watercraft and equipment between water bodies.

A big THANK YOU to our volunteers!

- Heidi Haskins
- Tom Shear
- Linda Irmscher
- Lisa Adams
- Bert Merriman
- Jeanne Kavanagh
- Jamie Fellinger (not pictured)
- Jennifer Mattoon (not pictured)

A total of 59 people were contacted at the BBL boat launch during the AIS Blitz. Lots of educational materials were handed out, as well as loads of SWAG (towels, floating key chains, etc.)

July: MSU Mobile Boat Wash / Clean Boats, Clean Waters

The MSU Mobile Boat Wash program provides a trailer-mounted washing unit, two staff that operate the unit and talk with boaters about the importance of "**Clean, Drain, and Dry**" to prevent the spread of aquatic invasive species. The trailer-mounted boat cleaning system uses heated high-pressure water that is effective in cleaning most invasive species from boats and trailers. A containment mat prevents runoff back into lakes and rivers. Local volunteers assist during the event.

MSU Mobile Boat Wash

The MSU Mobile Boat Wash was at the BBL Boat Launch on July 8th this summer.

Scheduling for this event occurs in March/April. Unfortunately, it rained on July 8th so not many boats were launched (or washed!) that day.

Hopefully the weather will cooperate in 2022!

Many thanks to volunteers Sheryl Steenwyk and Jeanne Kavanagh who stayed at the boat wash in spite of the inclement weather!

June – August: Bass Lakes AEP declares 2021 the Summer of Septic

The Summer of Septic program was rolled out at the June 20th and August 14th Public Meetings with distribution of educational materials and discounted septic tank pumping services.

The primary method to keep the lakes clean is to prevent phosphorus and nitrogen introduction into the lakes. The main ways these nutrients are introduced into lakes are via lawn fertilization and leaking septic systems.

- Fertilizing on lake side of properties is discouraged. If you choose to fertilize on the lake side, please wait to water so that the fertilizer is not washed into the lake.
- The elevated phosphorus levels in BBL suggest there are probably *leaking septic systems* from cabins/cottages/houses around the lake
- This was probably made worse by the high water levels in 2019 and 2020
- Septic systems, particularly old or infrequently pumped systems, leak into the lakes after rain
- *Algae blooms are indicators of septic leakage into the lakes*
    - BBL experienced several algal blooms in 2020 and 2021. Fortunately, these blooms were harmless filamentous green algae and Syrogyra algae
    - Little Bass Lake (LBL) had a Hazardous Algal Bloom (HAB) in October
    - The alga responsible for a HAB is a particular type of blue green algae (also known as cyanobacteria) that under the right conditions can produce algal toxins such as microcystin and release them into the water. *This toxin can be particularly harmful to dogs or other animals* who consume contaminated lake water.

Photos from HAB in LBL in October.

For more info: EGLE - Harmful Algal Blooms

May – September: CLMP for BBL and LBL

Michigan's Inland Lakes, Ours To Protect

Cooperative Lakes Monitoring Program

MiCorps
Monitoring Michigan's Water Quality

www.micorps.net

Cooperative Lakes Monitoring Program (CLMP) Program Overview

Michigan's unique geographical location provides its citizens with a wealth of freshwater resources including over 11,000 inland lakes. In addition to being valuable ecological resources, inland lakes provide tremendous aesthetic, recreational and economic opportunities. ***As more and more people use inland lakes, the potential for pollution related problems and impairment dramatically increases.*** High quality information, including water quality data, levels of use and the degree of use impairment is essential for determining the health of an inland lake and for developing a management plan to protect it. ***As the beneficiaries of Michigan's inland lake resources, citizens must take an active role in obtaining vital information and managing their inland lakes.***

Your tax-deductible donations to the Bass Lakes Area Environmental Partnership organization pay for this annual monitoring program to help protect our lakes now and for future generations!

Donate via PayPal at our website:
https://basslakesaep.wixsite.com/501c3

Or mail a check to:
Bass Lakes AEP
PO Box 15
Irons, MI 49644

Parameters Tested in 2021:

- Spring & Summer Total Phosphorus (water nutrient)
- Secchi Disk (water clarity)
- Dissolved Oxygen & Temperature (Oxygen needed to support fish populations)
- Chlorophyll-a (amount of algae in the water)
- Aquatic Invasive Species Watch (Milfoil and other invasive species)

These parameters are used to calculate the **Trophic State Index (TSI)** of a water body. The TSI is a classification system designed to rate water bodies based on the amount of biological productivity they sustain. It is reported on a numerical scale (0-100) where the numbers indicate the level of nutrient enrichment. Using the proper equations, we can convert results from Summer Total Phosphorus, Secchi Depth, and Chlorophyll-a to this Trophic Status Index. The TSI numbers are furthermore grouped into general categories (oligotrophic, mesotrophic, eutrophic, and hypereutrophic), to quickly give us a way to understand the general nutrient level of any lake. The tables below give the results-to-TSI conversions for the water quality data ranges normally seen in the CLMP.

Trophic State Definitions:

Oligotrophic: Generally deep and clear lakes with little aquatic plant or algae growth. These lakes maintain sufficient dissolved oxygen in the cool, deep-bottom waters during late summer to support cold water fish, such as trout and whitefish.

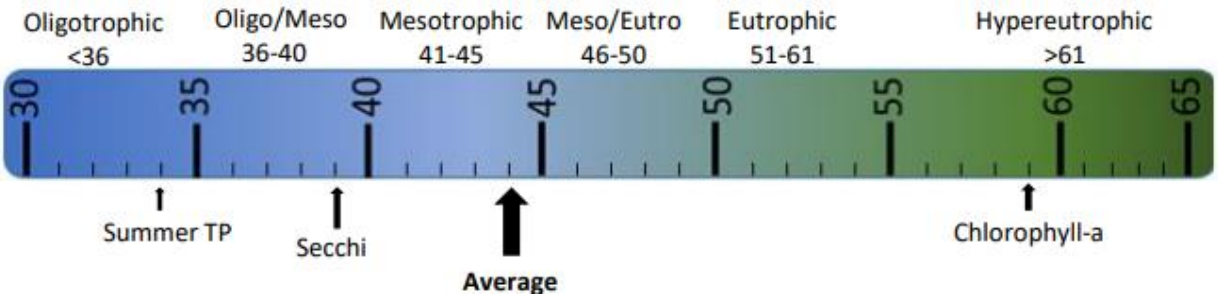
Mesotrophic: Lakes that fall between oligotrophic and eutrophic. Mid-ranged amounts of nutrients.

Eutrophic: Highly productive eutrophic lakes are generally shallow, turbid, and support abundant aquatic plant growth. In deep eutrophic lakes, the cool bottom waters usually contain little or no dissolved oxygen. Therefore, these lakes can only support warm water fish, such as bass and pike.

Hypereutrophic: A specialized category of euthrophic lakes. These lakes exhibit extremely high productivity, such as nuisance algae and weed growth.

Summary Results: Big Bass Lake

TSI for Big Bass Lake in 2021	
Average	44
Secchi Disk	39
Summer TP	34
Chlorophyll-a	59



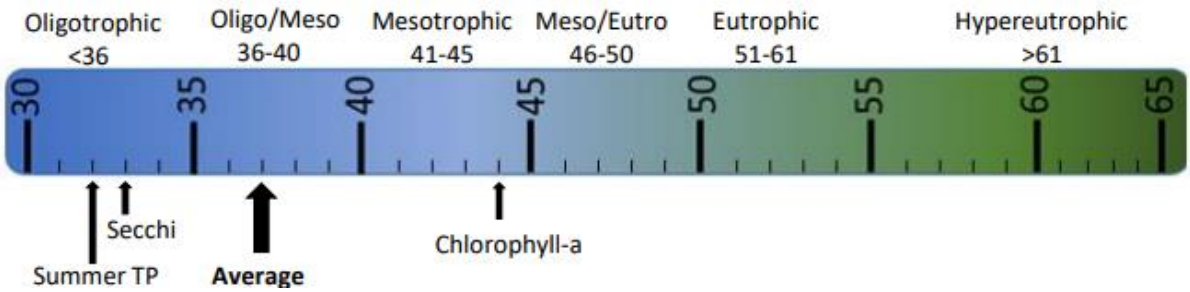
With an average TSI score of 44 based on 2021 Secchi transparency, chlorophyll-a, and summer total phosphorus data, **this lake is rated as a mesotrophic lake**. The lake keeps some dissolved oxygen in the bottom waters through early summer, but by mid-summer the lake has stratified and the bottom water is devoid of oxygen. CLMP recommends eight years of consistent monitoring in order to develop a strong data baseline.

Bottom Line: BBL is becoming less clear and experiencing more algae growth. Lack of dissolved oxygen due to nutrients in the water may be affecting fish populations.

Here is the full report for Big Bass Lake.

Summary Results: Little Bass Lake

TSI for Little Bass Lake in 2021	
Average	37
Secchi Disk	33
Summer TP	32
Chlorophyll-a	44



With an average TSI score of 37 based on 2021 Secchi transparency, chlorophyll-a, and summer total phosphorus data, **this lake is rated between the oligotrophic and mesotrophic lake** classification. The lake leans slightly more oligotrophic than mesotrophic. Due to its very low nutrient level, the lake is able to maintain dissolved oxygen throughout the most of the water column for the entire summer, though dissolved oxygen gets low on the very bottom waters. The mid-depth waters have oxygen surplus, possibly through algae production in this section of the lake. CLMP recommends eight years of consistent monitoring in order to develop a strong data baseline.

Bottom Line: Although suffering from extensive growth of the aquatic invasive species, Eurasian watermilfoil (milfoil), LBL is a very healthy lake.

Here is the full report for Little Bass Lake.

September: Labor Day Family Bass Fishing Contest

Let's get the "Big Bass" into Big Bass Lake again!

Bass Lakes AEP hosted a fish outing Labor Day Weekend for Bass Lakes' families and guests. The purpose of the fish outing was to harvest stunted bass and get families out fishing. The DNR has advised we remove the stunted small bass (10"-13") to allow pan fish populations to recover and help bass over 14" grow larger. There were prizes each day and an overall winner.

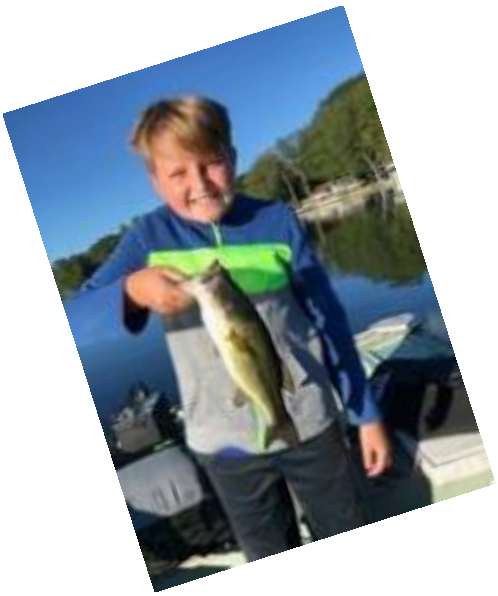
Thanks to all that helped improve the fishery and got kids fishing.
Looking forward to more family fun and fishing in 2022!
Special thanks to Tom Stinson for organizing the event!

Winners!

Day 1: The Vandenberg family
Day 2: The Pitcher family
Day 3: The VanDyken family

Overall prize for the most bass kept for all 3 days:
The Vandenberg family

This event was generously sponsored by BBLBPOA, Al & Bob's Sports in Grand Rapids and The Outdoorsmen Pro



Our Generous Donors:

GRANT	LAKE LEADERS (>$1000)	CONSERVATION SUSTAINERS ($1 - $999)	MEMORIALS (In remembrance of William Lindberg)
Laird Norton Family Foundation	Paul Brown	Anonymous	Betty Groshong
Trout Unlimited	Anonymous	Barb and Scotty Shimnoski	Delores Melvin
	Anonymous	Bob & Marty Tussing	Henry & Phyllis Howdyshell
		Dave & Jean Betteridge	Joanne & James Hodgins
		Dave & Sharon Joseph	Lewis Stoyer
		Elizabeth Swartz	Mary Shonkwiler
		Harold Lloyd	Nami Knox
		Jamie Fellinger & Jennifer Mattoon	Nami Stark County
		Jeanne & Bert Merriman	Nami-Six County, Inc
		Jerry & Ruth Heim	Susan Deak
		Jim White	Susan Katherman
		Kim Edwards	Timothy & Nancy Bechtold
		Kimberly Sequin	
		Kristi Carlson	
		Maureen Ziparo	
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		Randy & Colleen Howes	
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		Robert & Judy Van Dongen	
		Terry Swartz	
		Tom & Linda Irmsher	
		William Mailley