



Michigan's Citizen Volunteer Partnership for Lakes

2023 Annual Summary

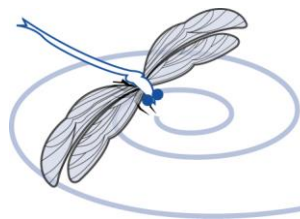
Managed By:

Michigan Department of Environment, Great Lakes, and Energy

Michigan State University

Michigan Lakes and Streams Association, Inc.

Huron River Watershed Council



Michigan Clean
Water Corps

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I. Introduction

The Michigan Department of Environment, Great Lakes, and Energy (EGLE), Michigan State University Extension, Michigan Lakes and Streams Association, and the Huron River Watershed Council partner to implement the MiCorps Cooperative Lakes Monitoring Program (CLMP).

This report summarizes the 2023 CLMP field season.

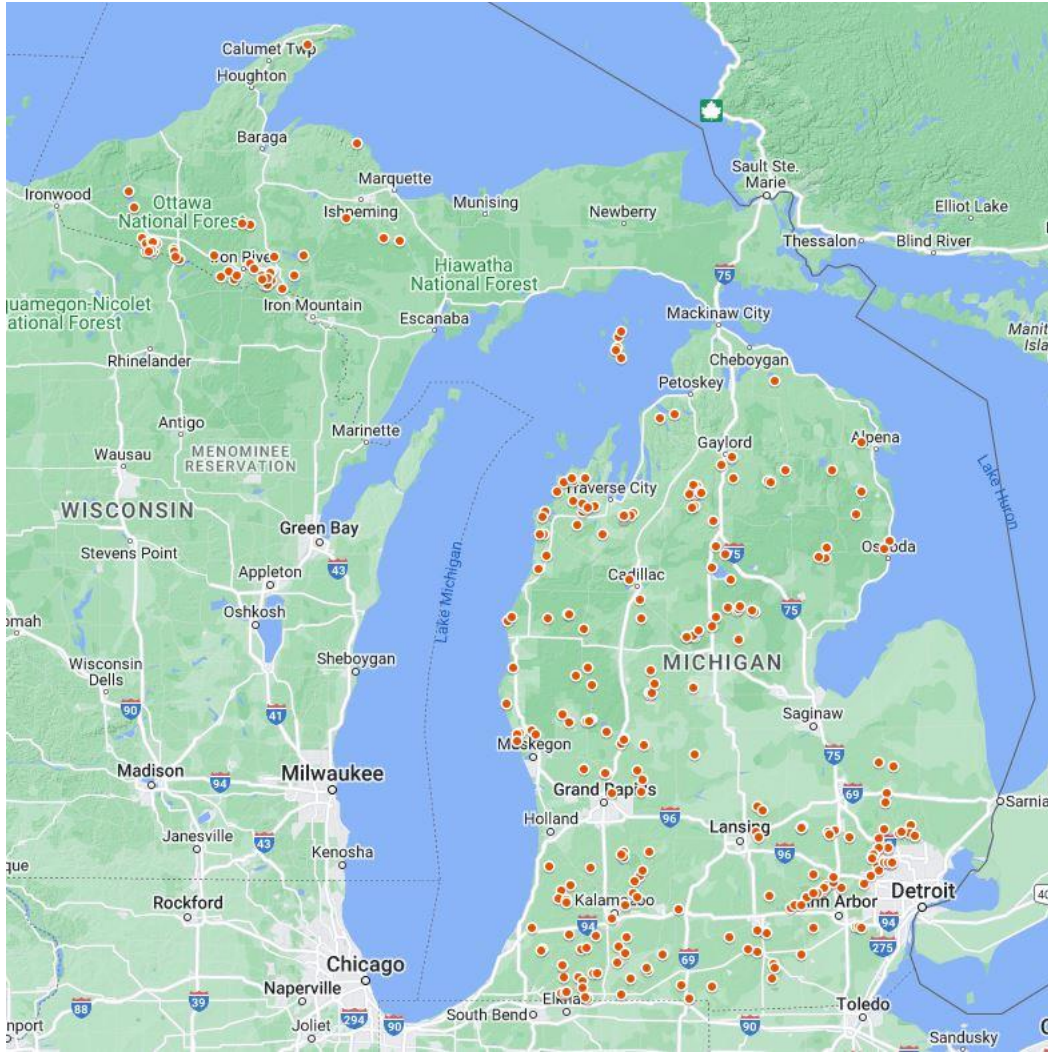
The goals of the CLMP are to:

- Provide baseline information and document trends in water quality for individual lakes.
- Educate lake residents, users, and interested citizens in the collection of water quality data, lake ecology, and lake management practices.
- Build a constituency of citizens to practice sound lake management at the local level and to build public support for lake quality protection.
- Provide a cost-effective process for EGLE to increase baseline data for lakes state-wide.

To learn more about the CLMP program, there are many other resources available:

1. The Michigan Clean Water Corps website includes a variety of resources such as the online database which contains all CLMP data. <https://data.micorps.net/view/lake/>
2. The CLMP Manual contains an overview of the program and the volunteer monitoring procedures: https://micorps.net/wp-content/uploads/2021/03/CLMP-Manual-2019update2_2021.pdf
3. Starting in 2014, each lake enrolling in the program receives an individual report summarizing their data. <https://micorps.net/lake-monitoring/individual-lake-reports/>
4. The CLMP Quality Assurance Project Plan (QAPP) is a detailed report on how the CLMP collects and maintains high quality scientific data: https://micorps.net/wp-content/uploads/2018/06/QAPP_CLMP_2018.pdf

II. Map of 2023 CLMP Participating Lakes



III. A Note About Trophic Status and Carlson's TSI

A Trophic Status Index (TSI) is a lake classification system that rates water bodies on the amount of biological production they sustain. The CLMP uses the TSI scheme developed in 1977 by limnologist Dr. Robert Carlson, who created a numerical scale (0-100) where the numbers indicate the level of nutrient enrichment. Using the proper equations, the CLMP convert results from Summer Total Phosphorus, Secchi Depth, and Chlorophyll-a to this TSI scale.

There are 3 primary categories of Trophic Status:

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. Carlson TSI score: Equal to or less than 38.

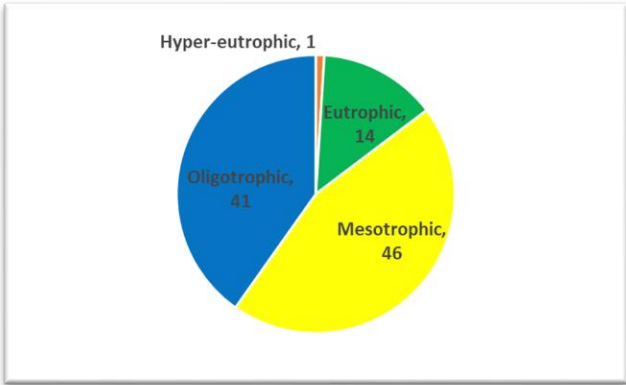
Mesotrophic: Lakes that fall between oligotrophic and eutrophic are considered mesotrophic, and these lakes have a moderate amount of nutrients. This level of nutrients supports a balanced amount of plant growth and aquatic life. Carlson TSI score: Greater than 38 and less than 48.

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. Carlson TSI Score: Equal to or greater than 48.

- **Hypereutrophic:** A specialized category of eutrophic lakes. These lakes exhibit extremely high productivity, such as nuisance algae and weed growth. Carlson TSI Score: Greater than 61.

IV. Summary Statistics of Monitored Parameters

A. General Statistics

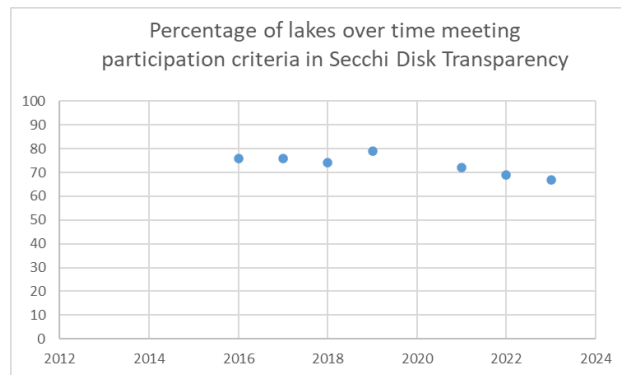
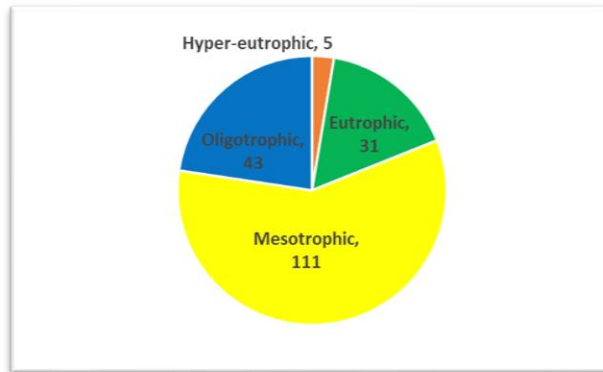
2023 General Statistics											
No. of lakes enrolled in at least one parameter	297										
Number of lakes meeting participation criteria for at least one parameter	278 (94%)										
Number of lakes with full participation in all three parameters measuring trophic status (Secchi Disk, Summer Total Phosphorus, Chlorophyll-a):	102 (34%)										
Average TSI of those lakes with full trophic participation	40.4 (Mesotrophic rating)										
Trophic status index breakdown: Lakes with full trophic participation											
 <table border="1"> <caption>Trophic Status Index Breakdown</caption> <thead> <tr> <th>Trophic Status</th> <th>Number of Lakes</th> </tr> </thead> <tbody> <tr> <td>Hyper-eutrophic</td> <td>1</td> </tr> <tr> <td>Eutrophic</td> <td>14</td> </tr> <tr> <td>Mesotrophic</td> <td>46</td> </tr> <tr> <td>Oligotrophic</td> <td>41</td> </tr> </tbody> </table>		Trophic Status	Number of Lakes	Hyper-eutrophic	1	Eutrophic	14	Mesotrophic	46	Oligotrophic	41
Trophic Status	Number of Lakes										
Hyper-eutrophic	1										
Eutrophic	14										
Mesotrophic	46										
Oligotrophic	41										

B. Secchi Disk Transparency

CLMP volunteers measure water transparency using a Secchi disk from late spring to the end of the summer. Ideally, 18 weekly measurements are made from mid-May through mid-September. Participation criteria is submitting at least eight measurements. If eight measurements are not submitted, the data is available in the MiCorps Database Exchange but is not included in TSI calculations and resultant statistics.

2023 Secchi Disk Transparency	
No. of sites enrolled	292
No. of sites meeting participation criteria	196 (67%)
Total no. of measurements reported	2766
Lake with lowest average transparency (in ft)	1.0 (Fox Lake, Muskegon)
Lake with highest average transparency (in ft)	39.1 (Higgins, S Basin, Roscommon)
Mean (average) measurement of all lakes (in ft)	12.2
Mean (average) TSI of all lakes	42.7 (Mesotrophic rating)

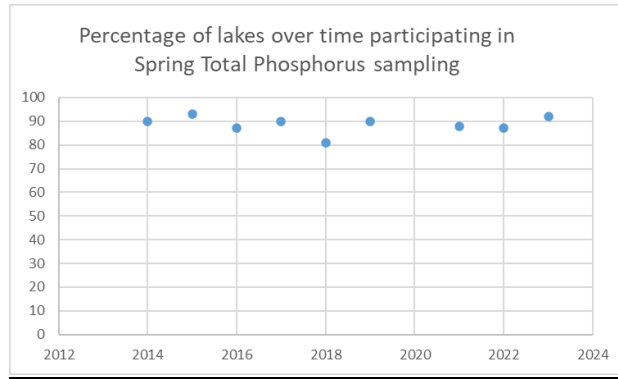
Trophic status index breakdown: Secchi Disk Transparency by number of lakes.



C. Total Phosphorus

CLMP volunteers collect water samples for total phosphorus during spring overturn, when the lake is generally well mixed from top to bottom, and during late summer, when the lake is at maximum temperature stratification from the surface to the bottom. Participation criteria in total phosphorus sampling is submitting a single sample for the spring and/or summer.

2023 Total Phosphorus Monitoring	
<u>Spring Overturn Sampling</u>	
No. of sites enrolled	212
No. of sites submitting valid samples	196 (92%)
Minimum reported value	<= 3 µg/L (31 lakes had <=3, which is the detection limit)
Maximum reported value	90 µg/L (Crockery Lake, Ottawa Co)
Mean (average) value	13.4 µg/L



Summer Stratification Sampling

No. of sites enrolled

263

No. of sites submitting valid samples

234 (89%)

Minimum reported value

$\leq 3 \mu\text{g/L}$ (26 lakes had ≤ 3 , which is the method detection limit)

Maximum reported value

280 $\mu\text{g/L}$ (James Lake, Ottawa Co)

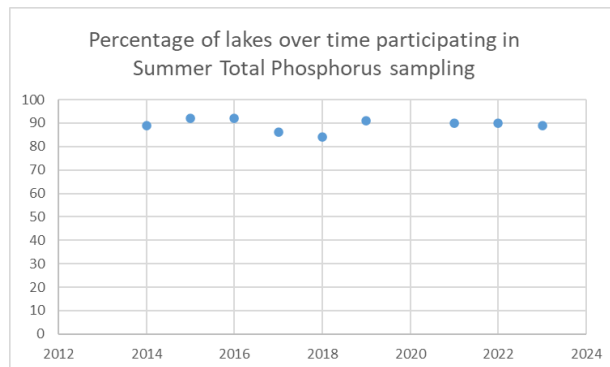
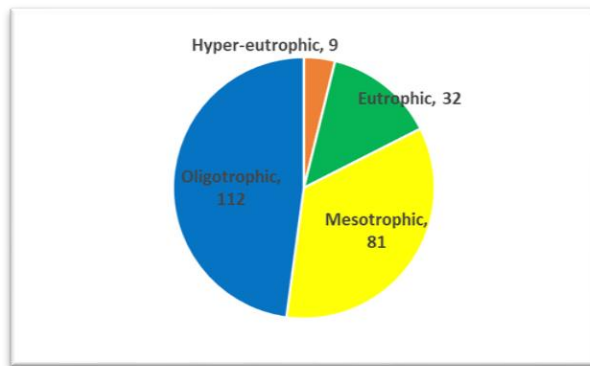
Mean (average) value

16.3 $\mu\text{g/L}$

Mean (average) TSI

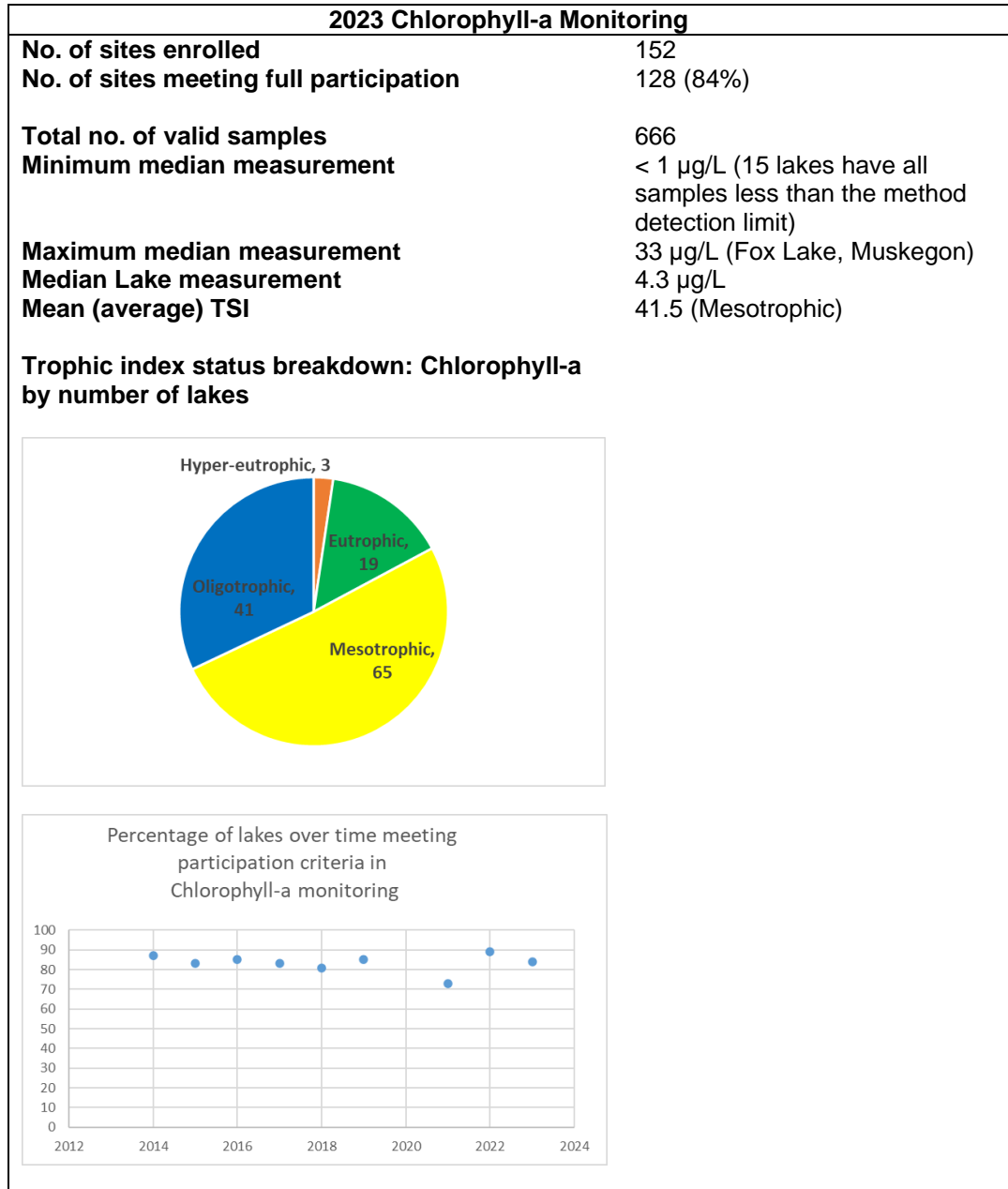
39.9 (Mesotrophic)

Trophic status index breakdown: Summer Total Phosphorus by number of lakes



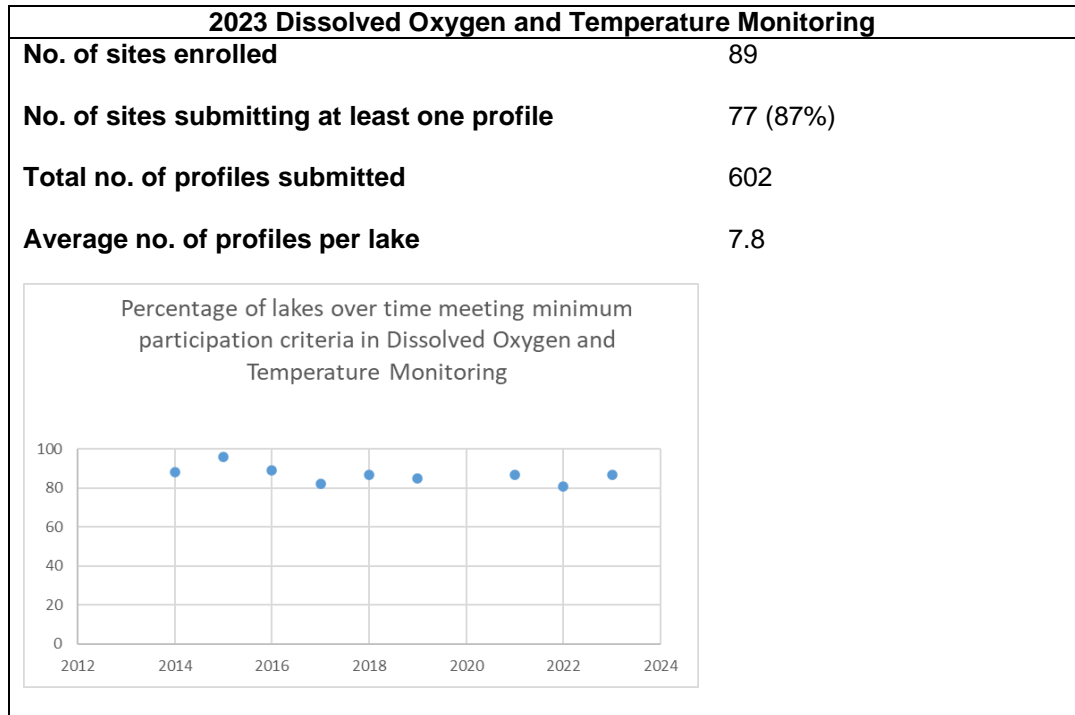
D. Chlorophyll-a

Volunteers collect water samples for chlorophyll-a, an estimator of the amount of algae in the water column, once per month from May through September. At least four valid samples must be submitted to be considered participating in this parameter. If four measurements are not submitted, the data is available in the MiCorps Database Exchange but is not included in TSI calculations and resultant statistics.



E. Dissolved Oxygen and Temperature

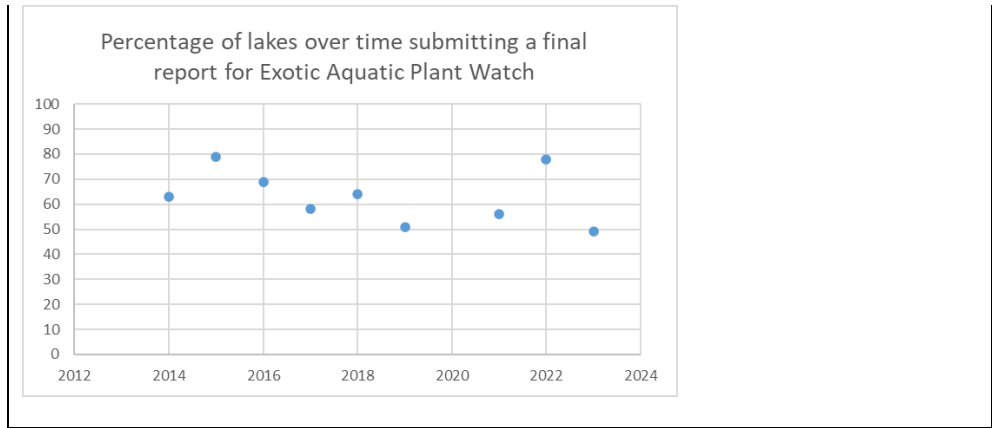
CLMP volunteers measure dissolved oxygen and temperature profiles for their lakes, measured from the surface to within 3 feet of the bottom, at the deepest point in the lake. These profile measurements are made with an electronic dissolved oxygen meter (YSI Pro20), ideally every two weeks from mid-May through mid-September. To meet minimum participation criteria, volunteers need to submit one dissolved oxygen profile for the summer, but full participation is preferred, which is 10 dissolved oxygen profiles (twice a month, May-September).



F. Exotic Aquatic Plant Watch

Volunteers in this monitoring program survey their lakes for invasive aquatic plants of special concern for Michigan lakes: curly-leaf pondweed, Eurasian watermilfoil, Hydrilla, starry stonewort, and European frog-bit. Participation criteria is met when the volunteer submits their final report to CLMP staff.

2023 Exotic Aquatic Plant Watch	
No. of sites enrolled	63
No. of sites submitting report	31 (49%)
No. of lakes reporting Eurasian water milfoil:	13 (42%)
No. of lakes reporting curly-leaf pondweed:	7 (23%)
No. of lakes reporting starry stonewort:	5 (16%)
No. of lakes reporting European frog-bit:	0 (0%)
No. of lakes reporting Hydrilla:	0 (0%)



D. Aquatic Plant Identification and Mapping

This program is the most labor-intensive volunteer activity within the CLMP. Typically, a team of volunteers from each enrolled lake is involved, with assistance from a MiCorps biologist. The end result is a plant distribution map and abundance report for all plants growing in the lake, including both native and, if found, invasive species. Participation criteria is met when the volunteer submits their final report to CLMP staff.

2023 Aquatic Plant Mapping	
No. of sites enrolled	5
No. of sites submitting report	4 (80%)
Lakes with a 2023 report	Lime (Benzie Co) Ransom (Benzie Co) Wall (Barry Co) Hemingway (Lapeer Co)

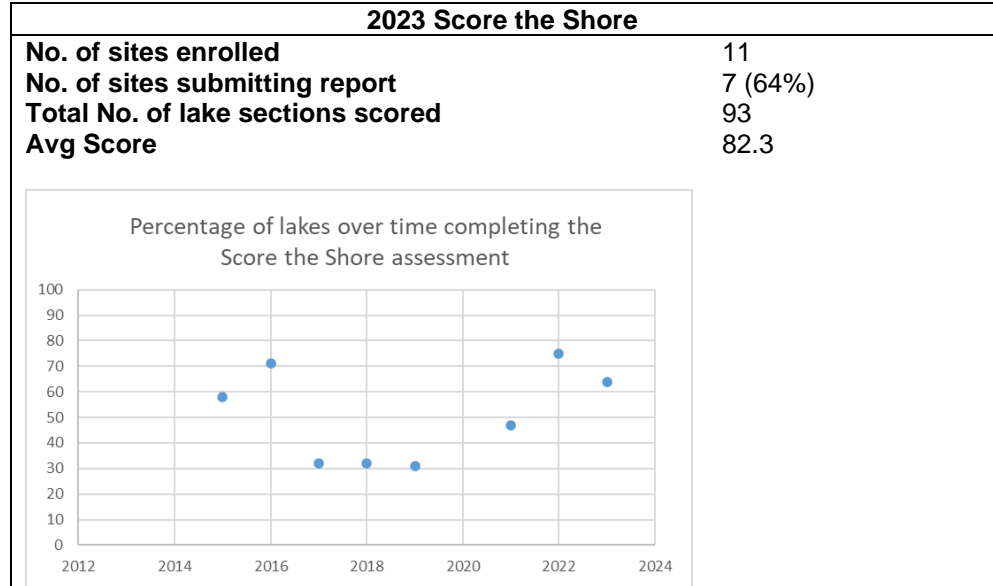
Percentage of lakes over time submitting final report for Aquatic Plant Mapping

Year	Percentage
2016	88
2017	14
2018	58
2019	78
2021	100
2022	100
2023	79

G. Score the Shore

Volunteers motor around their lake, reviewing 1000-foot sections of shoreline for littoral habitat, riparian habitat, and erosion control. Sections with natural habitat will have higher scores than ones with hardened shorelines. Each lake is scored on a 0-100 scale, with 100 having the highest quality habitat. Scores for each section as well as for the entire lake allow volunteers to review high quality areas as well as sections that would benefit from habitat enhancement. Participation criteria is met when the volunteer enters the data for every shoreline section into

the MiCorps online database or submits the data to CLMP staff.



V. Thank you, CLMP Volunteers!

Name	Role	Lake(s)
Lisa Adams	Lead Volunteer	Big and Little Bass
Camilla Anden McGeehin	Lead Volunteer	Kassuba
Thomas Anderson	Assisting Volunteer	No Lake on record
Tom Anderson	Lead Volunteer	Blue
Mike Andrachick	Lead Volunteer	No lake on record
Kim Andrews	Lead Volunteer	Big and Little Kelsey
Leslie Askwith	Lead Volunteer	No Lake on record
Harwood Lake Association	Lead Volunteer	Harwood
Gary Ault	Lead Volunteer	No Lake on record
James Ayres	Lead Volunteer	Crystal
Molly Bacon	Lead Volunteer	No Lake on record
Sue Bade	Lead Volunteer	Silver
Mary Bajcz	Lead Volunteer	No Lake on record
Terry Bakewell	Lead Volunteer	Horsehead
Mark & Julie Balhorn & Schneider	Lead Volunteer	Island
Jennifer Ball	Lead Volunteer	No Lake on record
Douglas Bamfield	Lead Volunteer	Long
Jeff Banaszynski	Lead Volunteer	Lakeville

David Banghart	Assisting Volunteer	No Lake on record
Sherry Barber	Lead Volunteer	Webinguaw
Jerry Beattie	Lead Volunteer	Twin
Ralph Bednarz	Lead Volunteer	Rennie
Bruce Beilfuss	Lead Volunteer	First and Second Fortune
Wendy Berg	Assisting Volunteer	No Lake on record
Deb Berkey	Lead Volunteer	Great Bear
Konner Beverly	Assisting Volunteer	No Lake on record
Laura Bland	Assisting Volunteer	No Lake on record
Martha Boetcher	Assisting Volunteer	No Lake on record
Terry Bone	Lead Volunteer	No Lake on record
Alan Bornick	Lead Volunteer	No Lake on record
Lisa Borre	Assisting Volunteer	No Lake on record
Mark T Bradburn	Lead Volunteer	Murray
Charissa Bredow-Shawcross	Assisting Volunteer	No Lake on record
Mary Bremigan	Lead Volunteer	Perch
Greg Bright	Lead Volunteer	Paw Paw
Stephen C Brown	Lead Volunteer	Bass
Greg Brucks	Assisting Volunteer	No Lake on record
Wendy Buckingham	Lead Volunteer	Eagle
Jennifer Burfield	Assisting Volunteer	No Lake on record
Marcia Burlbaugh	Assisting Volunteer	No Lake on record
Daniel Burton	Lead Volunteer	Paw Paw
Jim Cameron	Lead Volunteer	Hubbard
Dan Carbaugh	Lead Volunteer	Cedar Island
Roy Carlson	Lead Volunteer	Buck
Sue Carmichael	Assisting Volunteer	No Lake on record
Lynne Carothers	Lead Volunteer	No Lake on record
Nancy Carter	Lead Volunteer	Pleasant
Karin Caston	Assisting Volunteer	No Lake on record
Dennis Cerney	Lead Volunteer	Camp
Ashley Chad	Lead Volunteer	No Lake on record
Robert Champion	Lead Volunteer	Bartlett
Matthew Church	Assisting Volunteer	Twin
Mike Cipriano	Assisting Volunteer	Starvation
Shannon Clark	Assisting Volunteer	No Lake on record
Leslie Clark	Assisting Volunteer	No Lake on record
Leslie Clark	Lead Volunteer	No Lake on record
Steven Clark	Lead Volunteer	Woods
Greg Clark	Lead Volunteer	Long
Eric Clemetsen	Assisting Volunteer	Taylor
Chris Clifton	Assisting Volunteer	Swan
Brian Cline	Lead Volunteer	Ackerson

Elizabeth Closson	Assisting Volunteer	No Lake on record
James Collins	Assisting Volunteer	No Lake on record
Joette Collins	Lead Volunteer	Devils, Round
Alicia Conway	Lead Volunteer	No Lake on record
Chelsea Cooper	Assisting Volunteer	No Lake on record
Jeff Corey	Lead Volunteer	No Lake on record
David Cornelius	Lead Volunteer	Big Whitefish
Loretta Cornfield	Lead Volunteer	Many, many lakes in Gogebic Co.
Richard Costello	Lead Volunteer	Hemingway
Bruce Costen	Assisting Volunteer	Horsehead
William Courliss	Lead Volunteer	No Lake on record
Jeffrey Cousins	Assisting Volunteer	Aginaw
Nancy Cox	Assisting Volunteer	No Lake on record
Adam Crandall	Assisting Volunteer	Christiana, Juno, Painter
Dan Cutler	Lead Volunteer	Long
Paul Dalpra	Lead Volunteer	Mary
Jeffrey Darnell	Lead Volunteer	No Lake on record
Jeffrey Davis	Lead Volunteer	Cub
James DeBoer	Assisting Volunteer	White
Alexis DeGabriele	Assisting Volunteer	No Lake on record
Brian Degnore	Lead Volunteer	No Lake on record
Jack DeLee	Lead Volunteer	Shavehead
Angela DeMay	Lead Volunteer	No Lake on record
Melissa DeSimone	Lead Volunteer	Gravel
Mike Devarenne	Lead Volunteer	Emerald
Will Dew	Lead Volunteer	Sugarloaf
Cole Dickerson	Assisting Volunteer	No Lake on record
lisa Donati	Lead Volunteer	No Lake on record
Paul Dusterhoft	Assisting Volunteer	No Lake on record
Kathy Dwyer	Lead Volunteer	No Lake on record
Steve Edwards	Lead Volunteer	Nowland
Robert Ellis	Lead Volunteer	No Lake on record
Gary Ells	Assisting Volunteer	No Lake on record
David Emerling	Assisting Volunteer	No Lake on record
Susan English	Lead Volunteer	Nelson, Meek
John Etcorn	Lead Volunteer	No Lake on record
Denine Evink	Lead Volunteer	No Lake on record
Paul Fallon	Lead Volunteer	Birch
Michael Finney	Lead Volunteer	Ellen
Joan Fitzgibbon	Assisting Volunteer	No Lake on record
Richard Flegel	Lead Volunteer	Portage
Shannon Flynn	Lead Volunteer	Pleasant
Brooke Fogt	Lead Volunteer	Eagle

Bridget Forster	Lead Volunteer	Turtle
Susan Foster	Lead Volunteer	Arbutus
Chris Freiburger	Lead Volunteer	Batteese
Alan Freid	Lead Volunteer	Wall
Linda Frost	Lead Volunteer	Island
Martha Gabrielse	Lead Volunteer	Bills
Barb Gajewski	Lead Volunteer	Brule, Ottawa
Mike Gallagher	Lead Volunteer	Long, Gull
Doug Ganger	Lead Volunteer	Christiana, Juno, Painter
Tom Garrity	Lead Volunteer	Lily
Larry Gavin	Lead Volunteer	Long
Stephen George	Lead Volunteer	No Lake on record
Sandy Giaier	Lead Volunteer	No Lake on record
David Gian	Lead Volunteer	Tull #2
Merrie Gillaspie	Lead Volunteer	Wildwood
Michael Golas	Lead Volunteer	Sunset
James Goodsmith	Assisting Volunteer	No Lake on record
Gene Grabowski	Assisting Volunteer	No Lake on record
Laura Grabowski	Lead Volunteer	No Lake on record
Carolyn Grace	Lead Volunteer	No Lake on record
Guy Gramzow	Lead Volunteer	No Lake on record
Tim Green	Lead Volunteer	Taylor
Natalie Guenther	Assisting Volunteer	No Lake on record
Gregg Gustafson	Lead Volunteer	Brighton, Brighton
Stan Haan	Lead Volunteer	Martin, Martin
Jessica Hagen	Assisting Volunteer	No Lake on record
Robin Hagen	Lead Volunteer	No Lake on record
Thomas Haight	Lead Volunteer	No Lake on record
Andy Harrington	Lead Volunteer	Fremont
Shelby Harris	Lead Volunteer	Font, Fox, Greenes, Barneys, Lake Geneserath
Heidi Haskins	Assisting Volunteer	Little Bass
Ed Hass	Lead Volunteer	No Lake on record
Linda Hass	Lead Volunteer	No Lake on record
Kathryn Haughton	Lead Volunteer	Hunter
Florence Hawarden	Lead Volunteer	Mohawk, Wormer
Bonnie Hay	Lead Volunteer	No Lake on record
Bill Hayhow	Lead Volunteer	Viking
David Hays	Lead Volunteer	No Lake on record
Ron Hedy	Lead Volunteer	Cranberry
James Heaslip	Lead Volunteer	Triangle
Nanci Hengesbaugh	Assisting Volunteer	No Lake on record
William Henning	Lead Volunteer	Upper Herring

Sarah Heuer	Lead Volunteer	Independence
Erie High	Lead Volunteer	Elbow
Dawn Hoffman	Lead Volunteer	Big Pine Island
Marty Holtgren	Lead Volunteer	No Lake on record
Cindy Hooker	Lead Volunteer	Barlow
Patrick Hooyman	Lead Volunteer	Pentwater
Roger Hopkins	Lead Volunteer	No Lake on record
Erin Horton	Assisting Volunteer	No Lake on record
Autumn Hostetter	Lead Volunteer	Oatman
Lynne Isenbarger	Lead Volunteer	Lake of the Woods
John Jackson	Lead Volunteer	East Twin
Patricia Jarrett	Lead Volunteer	No Lake on record
Dan Johnson	Lead Volunteer	Pickerel, Kimball
Keith Jones	Assisting Volunteer	No Lake on record
Mary Kaczinski	Lead Volunteer	Farwell
Elaine Kaiser	Assisting Volunteer	No Lake on record
John Kaiser	Lead Volunteer	Long
Randy Kaja	Lead Volunteer	Scram
Michelle Kanipes	Lead Volunteer	Langford
Richard Kasowski	Lead Volunteer	Aginaw, Round, Rose
Margaret Kay	Lead Volunteer	Au Sable
Michael Kellar	Lead Volunteer	Orion
Roshan Khan	Assisting Volunteer	No Lake on record
Wayne Kiefer	Lead Volunteer	No Lake on record
Craig Kivi	Assisting Volunteer	No Lake on record
Leonard Klein	Lead Volunteer	Mickey, Long
Don Klobucar	Lead Volunteer	Wolf
Bob Klysen	Lead Volunteer	Indian
Lynn Knopf	Lead Volunteer	No Lake on record
Mark Kolkmeyr	Lead Volunteer	Square
Joe Kopchick	Assisting Volunteer	No Lake on record
Tony Koritnik	Lead Volunteer	No Lake on record
Kenneth Kosal	Lead Volunteer	No Lake on record
Ron Kreiger	Lead Volunteer	Silver
Ronald Kreiger	Lead Volunteer	No Lake on record
Sarah Krzemien	Assisting Volunteer	No Lake on record
Sarah Krzemien	Lead Volunteer	No Lake on record
Gregory Kulesza	Lead Volunteer	Spider
Rick Kursik	Lead Volunteer	Bennett, Lobdell
Linda Lane	Assisting Volunteer	No Lake on record
Charles Lane	Lead Volunteer	Crockery
Kip Lanning	Lead Volunteer	No Lake on record
Steve Lapalio	Lead Volunteer	Moon

Chris Lapins	Assisting Volunteer	No Lake on record
Mario Laudicina	Lead Volunteer	Lancer, Lancelot
Wayne Leblong	Assisting Volunteer	No Lake on record
Keith Lee	Lead Volunteer	Whitmore
James Lemkie	Assisting Volunteer	No Lake on record
Elizabeth Lemoine	Lead Volunteer	Fox
Michael Lesich	Lead Volunteer	Long
David Lewis	Lead Volunteer	Round, Blue, Mecosta
Steve Lewis	Lead Volunteer	South Bar
Eric Lindstrom	Lead Volunteer	Clear
Richard Livermore	Assisting Volunteer	No Lake on record
Kathy Loftus	Assisting Volunteer	Silver
John Loftus	Lead Volunteer	Silver
Matthew Long	Lead Volunteer	Stone Ledge
Pamela Lucas	Assisting Volunteer	No Lake on record
Mark Lux	Lead Volunteer	Posey
Pete Macauley	Lead Volunteer	Sand
Thomas Madden	Lead Volunteer	Stager
Dan Martin	Lead Volunteer	No Lake on record
John Mater	Lead Volunteer	No Lake on record
Brian Matthews	Assisting Volunteer	No Lake on record
David Maxson	Lead Volunteer	Ann
Michael Mayer	Lead Volunteer	Cedar
Paul D McEwen	Assisting Volunteer	No Lake on record
Mike McGarry	Lead Volunteer	Rose
Oliver McGeehin	Assisting Volunteer	No Lake on record
Ross McGeehin	Assisting Volunteer	No Lake on record
Mary Beth McGrew	Lead Volunteer	Lapeer
Rick Meeks	Lead Volunteer	Higgins
Marilyn Merit	Lead Volunteer	Maceday, Lotus
Susan Merten	Assisting Volunteer	No Lake on record
Bill Meserve	Lead Volunteer	Big Glen, Little Glen, Fisher, Brooks
Jim Meyer	Assisting Volunteer	Baseline, Tamarack
Jeffrey Meyer	Lead Volunteer	Beaver
Sandra Michalik	Lead Volunteer	Margrethe
Jen Micheli	Lead Volunteer	No Lake on record
Jim Mikolaizik	Lead Volunteer	No Lake on record
David Miller	Lead Volunteer	Oneida
Tina Miller	Lead Volunteer	Walled
Janet Miller	Lead Volunteer	Swan
James Minich	Lead Volunteer	Upper Crooked
Mark Mitchell	Lead Volunteer	Barton
Beth Moore	Lead Volunteer	No Lake on record

Peggy Munson	Lead Volunteer	Windover
Michael Mutschler	Lead Volunteer	No Lake on record
Joe Navarre	Assisting Volunteer	No Lake on record
Michael Needham	Lead Volunteer	Klinger
Patricia Nelson	Lead Volunteer	Paw Paw
John Nidelcheff	Assisting Volunteer	No Lake on record
Jodi Nieschulz	Lead Volunteer	Ovid
Joe Nohner	Lead Volunteer	Lansing
Denise Nurkala	Lead Volunteer	Bass
Craig Obrien	Lead Volunteer	Bear
Jill OConnor	Lead Volunteer	Hutchins
Robert Ogren	Lead Volunteer	Newcomb
Patricia Oleary	Assisting Volunteer	No Lake on record
Thomas Ollila	Lead Volunteer	Swan
Leo Osterholt	Lead Volunteer	No Lake on record
Jim Owens	Assisting Volunteer	No Lake on record
Dan Pampreen	Lead Volunteer	Ford
Molly Pandrea	Assisting Volunteer	No Lake on record
Nola Parkey	Lead Volunteer	Park
James Pedersen	Lead Volunteer	Stone
Bruce Pelletier	Lead Volunteer	Upper and Lower Hamlin
Kaytlin Perry	Assisting Volunteer	No Lake on record
Alan Pfau	Assisting Volunteer	No Lake on record
Peggy Pietrowicz	Lead Volunteer	Nichols
Philip Plaia	Assisting Volunteer	No Lake on record
Chris Powers	Lead Volunteer	Middle
Jeffrey Premetz	Assisting Volunteer	Lindsley
Joe Primozich	Lead Volunteer	No Lake on record
Tom Progar	Assisting Volunteer	No Lake on record
Alan Proulx	Lead Volunteer	Middle Straits
Cheryl Pytlarz	Lead Volunteer	Duck
Carol Ramsey	Assisting Volunteer	No Lake on record
Mark Ramsey	Lead Volunteer	No Lake on record
John Ransom	Lead Volunteer	Crystal, Fuller, Herendeene
Ron Reimink	Lead Volunteer	Lime
Wilfred Reinhardt	Assisting Volunteer	No Lake on record
Diane Reinhardt	Lead Volunteer	South Scott
Bruce Reniger	Lead Volunteer	Gogebic North, Gogebic South
Gale Rewa	Lead Volunteer	Osterhout
Stacy Reynolds	Lead Volunteer	No Lake on record
KURT RICHARDSON	Lead Volunteer	Ore
Pat Robinson	Assisting Volunteer	No Lake on record
Brian Robinson	Assisting Volunteer	No Lake on record

Bryan Roels	Lead Volunteer	Chippewa
Burns Rolland	Lead Volunteer	Barnes
William Rossi	Lead Volunteer	Chicagon
Jean Roth	Admin	Chain
Brittany Ruff	Lead Volunteer	No Lake on record
Michael Russell	Lead Volunteer	Muskellunge
Larry Ryles	Assisting Volunteer	No Lake on record
Jeff Sanborn	Lead Volunteer	No Lake on record
richard sarnwick	Assisting Volunteer	No Lake on record
Marie Schatz	Lead Volunteer	No Lake on record
Jeff Schimp	Lead Volunteer	Indian
Michael Schirott	Lead Volunteer	Baldwin
Eric SCHMIDT	Assisting Volunteer	No Lake on record
Ray Schnegelsberg	Lead Volunteer	Pettibone
Connie Selles	Lead Volunteer	Fish
Amy Seymour	Assisting Volunteer	No Lake on record
Eric Shafer	Lead Volunteer	Fishers
Tom Shear	Assisting Volunteer	No Lake on record
Frank Shelanskey	Lead Volunteer	Miner
Donald Shires	Assisting Volunteer	Ann
Paul Sigg	Lead Volunteer	No Lake on record
Jon Singo	Assisting Volunteer	No Lake on record
Craig Sisco	Lead Volunteer	O'Rourke
Robert Smart	Assisting Volunteer	No Lake on record
Mark Smith	Lead Volunteer	No Lake on record
Mary Kay Smith	Lead Volunteer	Budd
James Snell	Lead Volunteer	No Lake on record
Wayne Snyder	Lead Volunteer	Crystal
Marie Solum	Lead Volunteer	Black
Cyndy Southern	Lead Volunteer	Arnold
Ana-Maria Sparks	Assisting Volunteer	No Lake on record
Angie Stine	Lead Volunteer	Stanley
John Stivers	Lead Volunteer	Stony
Dan Stock	Lead Volunteer	Van Etten
George Stojic	Assisting Volunteer	No Lake on record
Yvonne Stone	Lead Volunteer	Crystal
Gerianne Street	Lead Volunteer	No Lake on record
Bonnie Swanson	Lead Volunteer	Portage, Little Portage, Baseline, Tamarack, Whitewood
Ed Szumowski	Lead Volunteer	Carter
Charlie Taylor	Lead Volunteer	North
John TenCate	Lead Volunteer	Payne
Dane Terrill	Lead Volunteer	Cedar

Anna Thelen	Lead Volunteer	Ovid
Jannell Tillman	Lead Volunteer	Byram
Thomas Tisue	Lead Volunteer	Duck
Michael Toner	Assisting Volunteer	No Lake on record
Ben Travis	Lead Volunteer	Big Shag, Little Shag
Taylor Truman	Lead Volunteer	No Lake on record
Myle Turpen	Assisting Volunteer	Mecosta, Blue, Round
Robert Tuttle	Lead Volunteer	Owasippe
David Ukleja	Lead Volunteer	Golden
Jeff Ulin	Lead Volunteer	No Lake on record
Grant Vander Laan	Assisting Volunteer	No Lake on record
Benjamin VanderWeide	Lead Volunteer	East Twin, Lost
Bruce Vanenkevort	Lead Volunteer	Big Maggie, West Maggie, Little Maggie
Mary Ann Vargas	Lead Volunteer	Chancellor (Blue)
Sharon Vaughn	Lead Volunteer	No Lake on record
Mark Wade	Lead Volunteer	No Lake on record
Cynthia Wahlund	Assisting Volunteer	No Lake on record
Frances Wallace	Lead Volunteer	Portage
Mike Wallach	Lead Volunteer	Big Shag
Charlie Walmsley	Lead Volunteer	Coldwater
Sandy Waterlander	Lead Volunteer	Cable
Ann Watson	Lead Volunteer	Bass Lake
Bruce Webb	Assisting Volunteer	Swan
Sally Wenczel	Lead Volunteer	No Lake on record
Michael Wernette	Lead Volunteer	No Lake on record
Ellen Whitehead	Lead Volunteer	Many, many lakes in Kalkaska Co.
Don Whitsitt	Lead Volunteer	Northwest Basin Pleasant
Terri Wilkerson	Lead Volunteer	Cordley
Kellie Willson	Lead Volunteer	Sylvan, Emerald
David Wilson	Lead Volunteer	Seymour, Seymour
Mark Witteveen	Assisting Volunteer	Gravel
Phillip Zigulich	Assisting Volunteer	No Lake on record
Dennis Zimmerman	Lead Volunteer	George, Shingle
Elizabeth Zwartz	Assisting Volunteer	No Lake on record

VI. Thank You Sample Collection Center Staff!

These individuals help with the logistics of collecting samples, mailing them to Lansing, and distributing and collecting Dissolved Oxygen/Temperature meters.

Amber Butterfield (Dickenson County Conservation District)
Michelle Kanipes (Invasive Species Control Coalition of Watersmeet)
Jean and Jim Roth (Michigan Lakes and Streams Association)
Ashley Colborn and Andy Evans (Michigan Department of Natural Resources)

The following EGLE staff:

Jack Cotrone
Kathy David
Sonya Hudson
Tamara Lipsey
Deana Mercs
Amy Nevison
Lucy Robinson
Stevie Swanson
Crystal Zielinski

VII. CLMP Contacts

If you have any questions about the CLMP, please contact Erick Elgin with Michigan State University Extension at elgineri@msu.edu, and [subscribe to our email list](#) to receive announcements and updates on these monitoring programs.