



Cooperative Lakes Monitoring Program

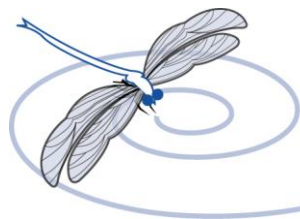
Michigan Lakes - Ours to Protect

Michigan's Citizen Volunteer Partnership for Lakes

2021 Annual Summary

Managed By:

Michigan Department of Environment, Great Lakes, and Energy
Michigan State University Extension
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 2021 CLMP field season.

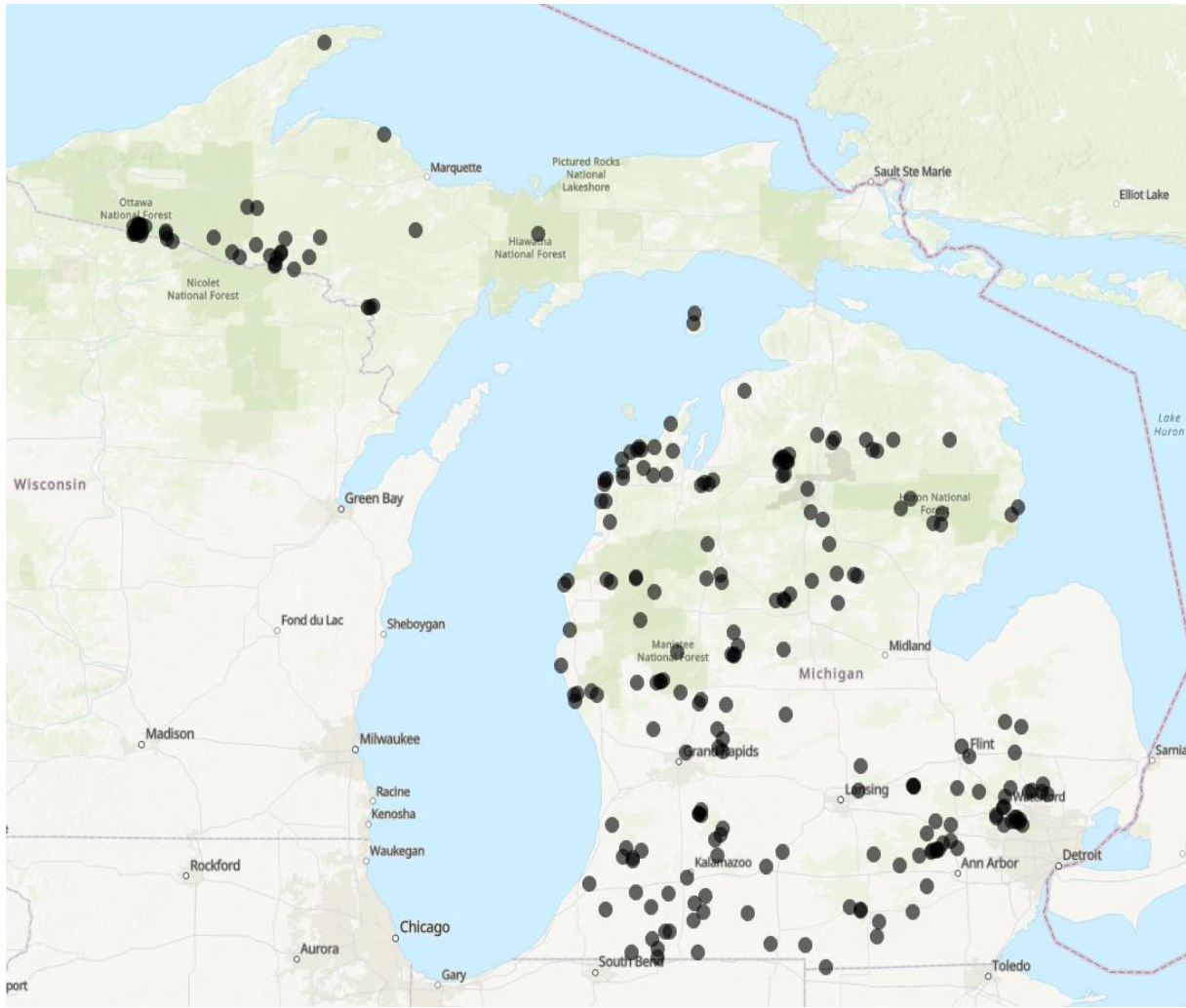
The goals of the CLMP are to:

- 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 received 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 2021 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 possessing of mid-ranged amounts of nutrients. Carlson TSI Score: Greater than 38 and less than or equal to 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: 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

2021 General Statistics	
No. of sites enrolled in at least one parameter	266
Number of sites meeting participation criteria for at least one parameter	235 (88%)
Number of sites with full participation in all three parameters measuring trophic status (Secchi Disk, Summer Total Phosphorus, Chlorophyll-a):	91 (34%)
Average TSI of those sites with full trophic participation	41.6 (Mesotrophic rating)

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 involves submitting at least 8 measurements.

2021 Secchi Disk Transparency	
No. of sites enrolled	255
No. of sites meeting participation criteria	184 (72%)
Total no. of measurements reported	2744
Lake with lowest average transparency	1.8' (Thread Lake, Genesee County)
Lake with highest average transparency	39.5' (North Higgins Lake,

	Roscommon County)
Mean (average) measurement of all lakes	12.6'
Mean (average) TSI of all lakes	42.3' (Mesotrophic rating)

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.

2021 Total Phosphorus Monitoring	
<u>Spring Overturn Sampling</u>	
No. of sites enrolled	155
No. of sites submitting valid samples	137 (88%)
Minimum reported value	< 3 µg/L (multiple lakes)
Maximum reported value	120 µg/L (Woods Lake, Kalamazoo Co)
Mean (average) value	17.4 µg/L
<u>Summer Stratification Sampling</u>	
No. of sites enrolled	225
No. of sites submitting valid samples	202 (90%)
Minimum reported value	< 3 µg/L (multiple lakes)
Maximum reported value	79 µg/L (Diane Lake, Hillsdale Co)
Mean (average) value	15.9 µg/L
Mean (average) TSI	41.4 (Mesotrophic)

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 full participation in this parameter.

2021 Chlorophyll-a Monitoring	
No. of sites enrolled	139
No. of sites meeting full participation	102 (73%)
Total no. of valid samples	525
Minimum median measurement	< 1 µg/L (multiple lakes)
Maximum median measurement	26 µg/L (Diane Lake, Hillsdale Co)
Median Lake measurement	4.9 µg/L
Mean (average) TSI	43.4 (Mesotrophic)

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 or YSI 550A), ideally every two weeks from mid-May through mid-September.

2021 Dissolved Oxygen and Temperature Monitoring	
No. of sites enrolled	76
Using EGLE meter	31
Using own meter	45
No. of sites submitting at least one profile	66 (87%)
Total no. of profiles submitted	529

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

2021 Exotic Aquatic Plant Watch	
No. of sites enrolled	63
No. of sites submitting report	35 (56%)
No. of lakes reporting Eurasian water milfoil:	18 (51%)
No. of lakes reporting curly-leaf pondweed:	7 (20%)
No. of lakes reporting Hydrilla:	0 (0%)
No. of lakes reporting starry stonewort:	6 (17%)
No. of lakes reporting European frog-bit:	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.

2021 Aquatic Plant Mapping	
No. of sites enrolled	6
No. of sites submitting report	6 (xx%)

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.

2021 Score the Shore	
No. of sites enrolled	34
No. of sites submitting report	16 (47%)
Total No. of lake sections scored	237
Avg Score	75.6

V. EGLE Side-by-Side Data Verification

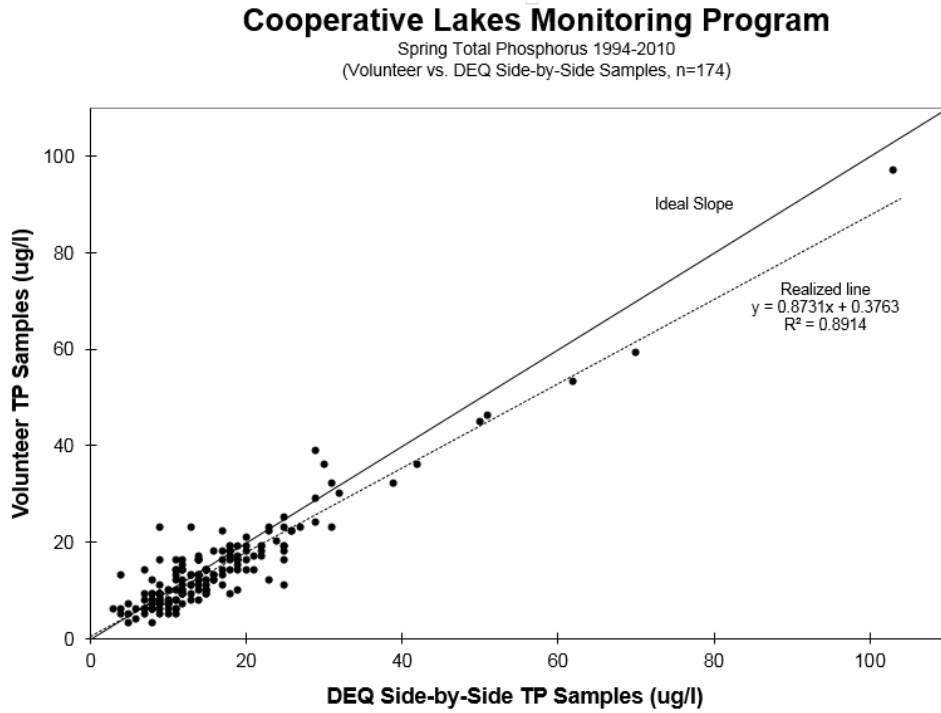
An EGLE biologist monitors several lakes a year alongside the CLMP volunteers for phosphorus and chlorophyll. In the early years of the program, EGLE used its standard operating procedures to collect the data, which differ slightly from the volunteers' monitoring procedures. The goal of the side-by-side visits was to ensure that the volunteer procedures produced accurate data. The correlation between EGLE samples and volunteer's samples has proven to be very high through many years of these side-by-side tests (Graphs C,D, and F). CLMP and EGLE staff have concluded that the CLMP volunteer sampling methods resulted in the collection of accurate data.

Starting in 2011, EGLE began to use the volunteer procedures instead of EGLE standard procedures to run the side-by-side data verifications. This data can be found in Graphs E and G. The new goal of the side-by-side visits are to build relationships with the volunteers and ensure that they have reviewed the training materials and correctly follow the volunteer procedures. Another goal of the side-by-side visits is to check that the results of samples collected by a professional very familiar with the procedures gets the same result as a volunteer who may be new to it. Samples are collected by both the volunteer and EGLE staff and are both analyzed at the State of Michigan Environmental Lab.

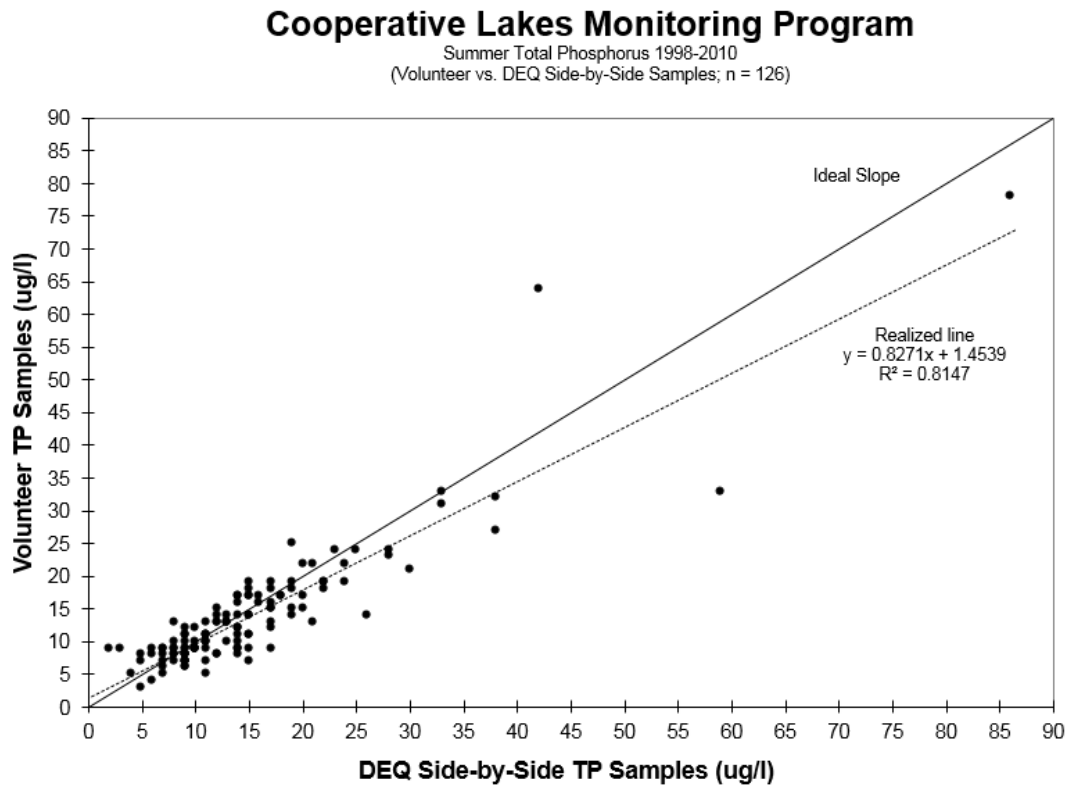
Starting in 2011, spring total P side-by-side visits are no longer conducted due to the time constraints of sampling spring phosphorus quickly after ice out.

In 2021, because of the COVID epidemic, there were no Side-by-Side visits conducted.

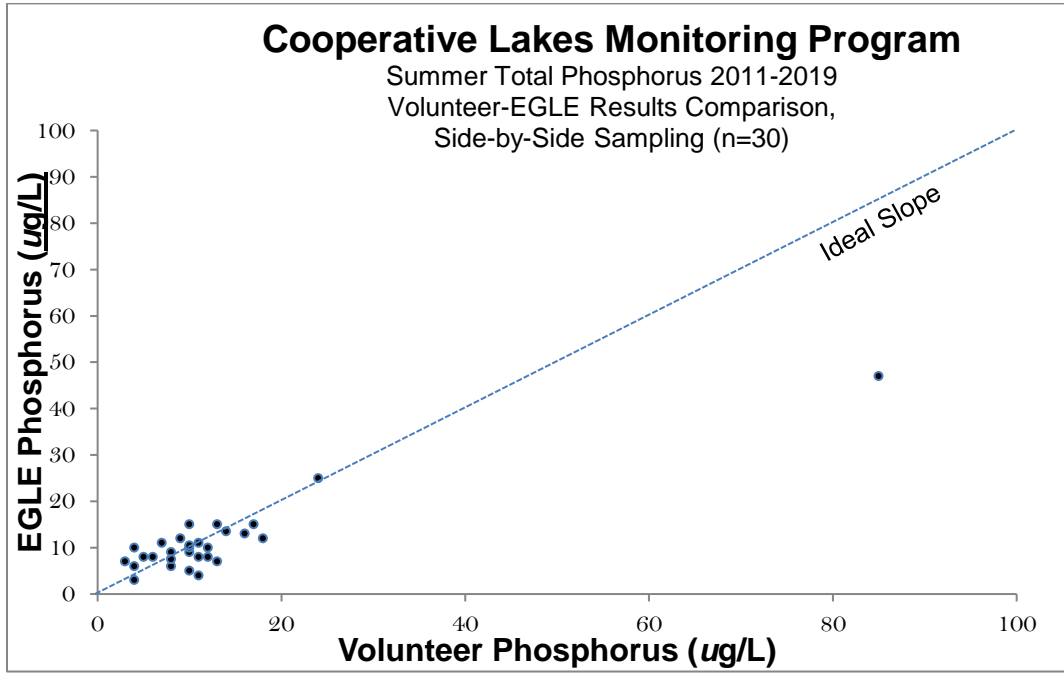
C. Total Spring Phosphorus Side-by-Side Data 1994-2010



D. Total Summer Phosphorus Side-by-Side Data 1998-2010



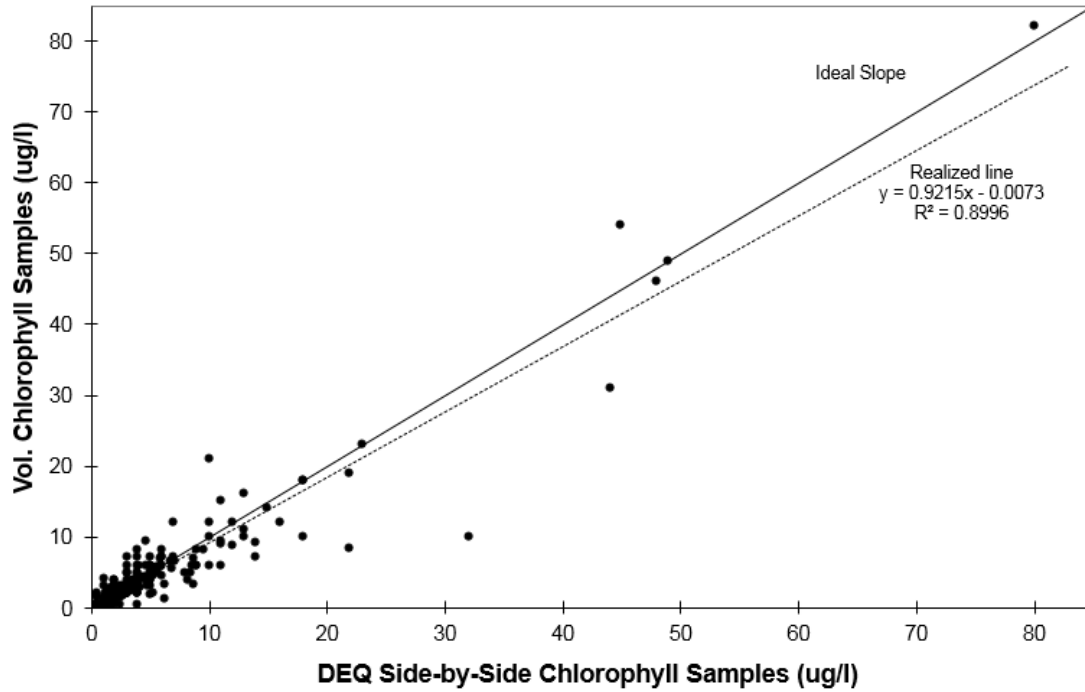
E. Total Summer Phosphorus Side-by-Side Data 2011-2019



F. Chlorophyll, Side-by-Side Data 1994-2010

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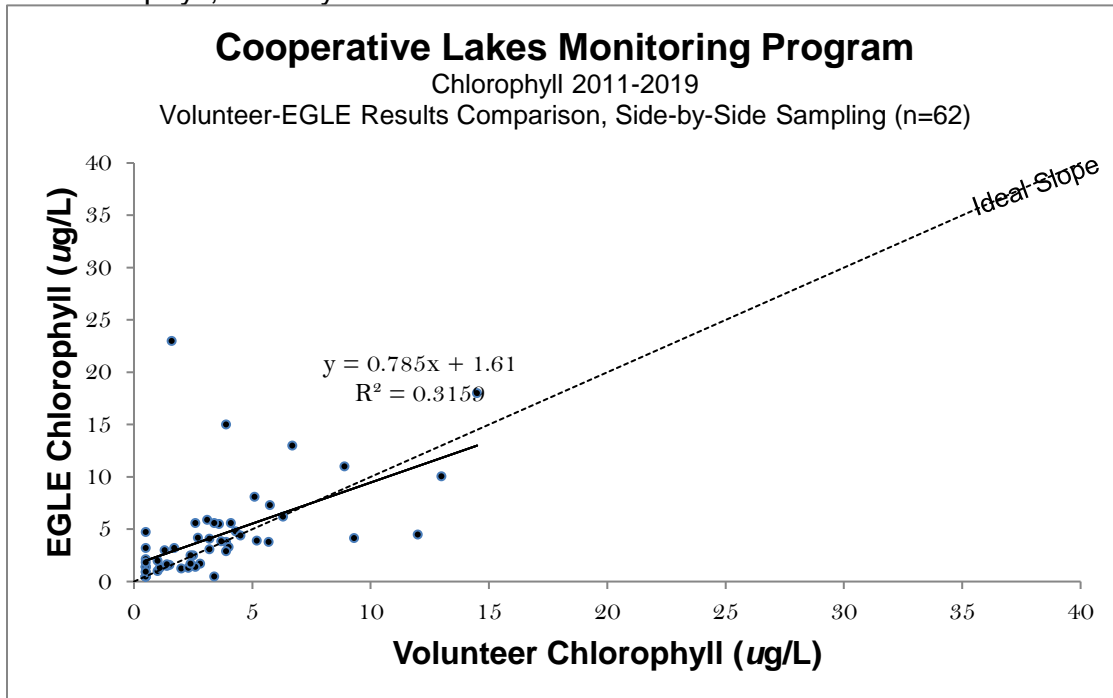
Chlorophyll a 1998-2010
(Volunteer vs. DEQ Side-by-Side Samples, n=198)



G. Chlorophyll, Side-by-Side Data 2011-2019

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Chlorophyll 2011-2019
Volunteer-EGLE Results Comparison, Side-by-Side Sampling (n=62)



VI. Thank you, CLMP Volunteers!

Lake	County	Lead Volunteers	Assisting Volunteers
1000 Island	Gogebic	Loretta Cornfield, Richard Kasowski	Nanci Hengesbaugh
Allen	Lenawee	William Brown	
Anderson	Marquette	Jeffrey Darnell	
Ann	Benzie	David Maxson	
Arbutus	Grand Traverse	Robert Johnson, Susan Foster	
Arnold	Clare	Tony Koritnik	Michael Toner
Au Sable	Ogemaw	Margaret Kay	Daniel Kocis, Spencer Chinavare
Austin	Kalamazoo	Matt Chumas	
Avery	Montmorency	Bart Mol	
Bar (South)	Leelanau	John Peterson	
Barlow	Barry	Michael Cunningham	
Barnes	Lapeer	Burns Rolland	
Barneys	Charlevoix	Shelby Harris	
Barton	Kalamazoo	Mark Mitchell	Wayne Leblong
Baseline	Livingston	Jon Waitz	Jim Meyer
Batteese	Jackson	Chris Freiburger	Kathy David
Bear	Kalkaska	Craig Obrien	
Bear	Manistee	Jeff Sanborn	
Bear (Big)	Otsego	Gregg Kabacinski	
Beaver	Alpena	Jeffrey Meyer	
Big	Gogebic	Loretta Cornfield	Tom Krautkramer
Big Africa	Gogebic	Loretta Cornfield	Eugene Clark
Big Bass	Lake	Lisa Adams	Colleen Howes, Heidi Haskins, Tom Shear
Big Lake	Osceola	Martha Kiander	
Big Maggie	Iron	Bruce Vanenkevort	
Bills	Newaygo	Martha Gabrielse	
Birch	Cass	Paul Fallon	
Bloomfield	Oakland	Jill Forbis	
Blue	Iron	Tom Anderson	
Blue	Mecosta	David Lewis	
Blue (North)	Kalkaska	Tina Peterson	
Brooks	Leelanau	Mike Litch	
Brooks	Newaygo	Kent Cole	
Byram	Genesee	Jannell Tillman	
Cable	Iron	Sandy Waterlander	

Camp	Iron	Dennis Cerney	
Cass	Oakland	Leslie Clark	
Cedar	Alcona	Michael Mayer	
Cedar Island	Oakland	Dan Carbaugh	
Center	Osceola	Harris Iler	
Chain	Iosco	Jean Roth	James Roth
Chancellor (Blue)	Mason	Mary Ann Vargas	
Charlevoix	Charlevoix	Christine Heroy	
Chicagon	Iron	William Rossi	
Chippewa	Mecosta	Bryan Roels	
Cisco	Gogebic	Loretta Cornfield	
Clark	Livingston	Carl Slindee	
Clear	Jackson	Eric Lindstrom	
Clear	Oakland	Sheryl Hugger	
Clearwater	Gogebic	Loretta Cornfield	
Cobb	Barry	Jeff Ulin	
Coldwater	Isabella	Charlie Walmsley	
Corey	St. Joseph	James Snell	
Cranberry	Oakland	Ron Heady	
Crockery	Ottawa	Patricia Wolters	
Crooked	Kalkaska	Tina Peterson	
Crooked (Big)	Kent	Tom Betts	
Crooked (Upper)	Barry	Michael Mutschler	Kaytlin Perry
Crystal	Benzie	John Ransom	
Crystal	Gogebic	Yvonne Stone	
Crystal	Hillsdale	Wayne Snyder	
Crystal	Montcalm	Joe Kopchick	Hollie Skinner
Crystal	Manistee	Joanne Montgomery	
Cub	Kalkaska	Jeffrey Davis	
Devils	Lenawee	Joette Collins	
Dewey	Cass	Veronnica Kenreich	
Diamond	Osceola	Jim Veenstra	
Diane	Hillsdale	Arda Bucher	
Dollar	Oakland	Leslie Clark	
Duck	Calhoun	Nanette Hibler	
Duck	Muskegon	Thomas Tisue	
Duck (North)	Gogebic	Ursula Charaf	
Duck (South)	Gogebic	Ursula Charaf	
Eagle	Allegan	Cary Hamann	
Eagle	Cass	Sue Carmichael	Lori Mroczek
Eagle	Kalkaska	Tina Peterson	
Eagle	Van Buren	Brooke Fogt	Kerrie Paczkowski
Earl	Livingston	John Hartsig	

East Bay	Gogebic	Loretta Cornfield	Jim Okraszewski
Eel	Gogebic	John Mater	
Egg	Charlevoix	Shelby Harris	
Ellen	Iron	Michael Finney	
Emerald	Kent	Mike Devarenne	
Emerald	Newaygo	Kellie Willson	
Farwell	Jackson	Mary Kaczinski	
Fire Lake	Iron	Jim Fogarty	
First Fortune	Iron	Steve Peterman	
Fish	Van Buren	Connie Selles	
Fisher (Big)	Leelanau	Mike Litch	
Fishers	St. Joseph	Eric Shafer	
Fishhawk	Gogebic	Loretta Cornfield	Thomas Zeihen
Flint Park	Genesee	Sarah Scheitler	
Fox Lake	Charlevoix	Shelby Harris	
Fox Lake	Muskegon	Elizabeth Lemoine	
Fremont	Newaygo	Andy Harrington	
George	Clare	Dennis Zimmerman	
Glen (Big)	Leelanau	Mike Litch	
Glen (Little)	Leelanau	Mike Litch	
Golden	Iron	Dean Pelkey	
Grass	Gladwin	Molly Bacon	
Gratiot	Keweenaw	Bonnie Hay	
Gravel	Van Buren	Melissa DeSimone	
Great Bear (North Basin)	Van Buren	Deb Berkey	
Great Bear (South Basin)	Van Buren	Deb Berkey	
Green Lake	Allegan	Brian Talsma	
Greenes Lake	Charlevoix	Shelby Harris	
Gull	Kalamazoo	Mike Gallagher	Kaytlin Perry
Gunn	Mason	Chelsea Cooper	
Hamilton	Dickinson	martin Straka	
Hamlin (Lower)	Mason	Bruce Pelletier	
Hamlin (Upper)	Mason	Bruce Pelletier	
Harwood	Cass	Harwood Lake Association	
Hemingway	Lapeer	Richard Costello	
Herring (Lower)	Benzie	Mark Smith	
Herring (Upper)	Benzie	Jane Perrino	
Herring (Upper)	Benzie	William Henning	
Hibbard	Berrien	Stephen Pratt	

Higgins (N. Basin)	Roscommon	Rick Meeks, Brian Degnore	
Higgins (S. Basin)	Roscommon	Rick Meeks, Brian Degnore	Lauryn Magno
Horsehead	Mecosta	Terry Bakewell	
Hunter	Gladwin	Kathryn Haughton	
Hutchins	Allegan	Jill OConnor	
Huyck	Branch	Leo Osterholt	
Independence	Marquette	Sarah Heuer	
Independence	Marquette	Sarah Heuer	
Indian	Gogebic	Loretta Cornfield	Mary Ruhl
Indian	Kalamazoo	John Wilks	Tom Kowalski, Michael Gildea
Indian	Kalkaska	Tina Peterson	
Island	Gladwin	Linda Frost	
Island	Grand Traverse	John Mater	
James	Roscommon	Terry Bone	
Jewell	Alcona	Erin Bunting	
Kimball	Newaygo	Dan Johnson	
Klinger	St. Joseph	Michael Needham, Chris Bowers	
Lake Geneserath	Charlevoix	Shelby Harris	
Lake Lancer	Gladwin	Mario Laudicina	
Lake Maria	Charlevoix	Shelby Harris	
Lake of the Woods	Branch	Lynne Isenbarger, Jace Cole	
Lakeville	Oakland	Jeff Banaszynski	Michael Smolka
Lancelot	Gladwin	Mario Laudicina	Robert Heydenburg
Leelanau (North)	Leelanau	Brian Price	
Leelanau (South)	Leelanau	Brian Price	
Lily	Clare	Tom Garrity	
Lime	Leelanau	Ron Reimink	
Lindsley	Gogebic	Loretta Cornfield	Jeffrey Premetz
Little Africa	Gogebic	Loretta Cornfield	Eugene Clark
Little Bass	Lake	Lisa Adams	Colleen Howes, Heidi Haskins, Tom Shear
Little Maggie	Iron	Bruce Vanenkevort	
Long	Barry	Douglas Bamfield	
Long	Benzie	John Kaiser	
Long	Cass	Paul Sigg	
Long	Gogebic	Arnold Domanus	
Long	Grand Traverse	Leonard Klein	Kelsey Mills, Laurie Davison
Long	Iosco	Chris Tyll	

Long	Oakland	Larry Gavin	
Long (Little)	Barry	John Etcorn	Chris Lapins
Long (Upper)	Oakland	Stephen George	
Loon	Oscoda	Jeremy Geist	
Lost	Oakland	Benjamin VanderWeide	Maryann Whitman, Grant Vander Laan, Parker Maynard,Katrianna Studtmann, Maxwell Dunn
Lotus	Oakland	Marilyn Merit	
Louise	Dickinson	martin Straka	
Louise	Oakland	Dwight Woodbridge	
Maceday	Oakland	Marilyn Merit	Katie Yates
Mack	Oscoda	Jeremy Geist	
Magician	Cass	Mick Braman	
Mamie	Gogebic	Loretta Cornfield	Jim Okraszewski
Margrethe	Crawford	Sandra Michalik	
Mary	Dickinson	Martin Straka	
Mary	Iron	Paul Dalpra	
Mecosta	Mecosta	David Lewis	
Mickey	Grand Traverse	Leonard Klein	
Middle	Lapeer	Chris Powers	
Middle Straits	Oakland	Alan Proulx	
Moon	Gogebic	Steve Lapalio	
Morley	Gogebic	Loretta Cornfield	Tom Krautkramer
Mowby	Newaygo	James Dunn	
Murray	Kent	Mark T Bradburn	
Muskellunge	Montcalm	Michael Russell	
Newcomb	Montcalm	Robert Ogren	
North	Washtenaw	Charlie Taylor	
Nowland	Charlevoix	Steve Edwards	
Oneida	Livingston	David Miller	
Opal	Otsego	Robert Baroni	
Ore	Livingston	Kurt Richardson	
Orion	Oakland	Michael Kellar	
Osterhout	Allegan	Gale Rewa	
Ottawa	Iron	Barb Gajewski	
Otter	Benzie	Jane Perrino, Jodi Monteith	
Otter	Oakland	Deborah Emmer	Kim Yeip
Ovid	Clinton	David Zmikly	
Owasippe	Muskegon	Robert Tuttle	
Oxbow	Oakland	Richard Walklet	

Papoose	Kalkaska	Tina Peterson	
Park	Clinton	Nola Parkey	Hollie Skinner, Simphiwe Zwane
Paw Paw	Hillsdale	Greg Bright	
Paw Paw	Kalamazoo	Daniel Burton	
Paw Paw (Little)	Berrien	Patricia Nelson	
Payne	Barry	Lids Davis	
Peanut	Benzie	Jodi Monteith	
Pearl	Benzie	Jane Perrino, Jodi Monteith	
Pentwater	Oceana	Joe Primozich	
Perch	Hillsdale	Linda McCracken	
Perch	Iron	Thomas Haight	
Perch	Otsego	Mary Bremigan	
Pickerel	Kalkaska	Tina Peterson	
Pickerel	Newaygo	Dan Johnson	
Pine Island (Big)	Kent	Dawn Hoffman	
Platte (Little)	Benzie	Jane Perrino	
Pleasant	Wexford	Roger Hopkins	
Pleasant	Washtenaw	Don Whitsitt, Lon Nordeen	
Poor	Gogebic	Loretta Cornfield	Greg Wenzel
Portage	St. Joseph	Richard Flegel	
Portage	Washtenaw	Jon Waitz	James Collins
Portage (Big)	Jackson	Carmen Burgess	
Portage (Little)	Washtenaw	Jon Waitz	
Posey	Lenawee	Mark Lux	
Record	Gogebic	Loretta Cornfield	Eugene Clark
Rennie	Grand Traverse	Ralph Bednarz	Laurie Davison
Robbins	Cass	Alexander Bozymowski	
Rose	Osceola	Mike McGarry	Daniel McGarry, Dani McGarry, Richard Paalman
Rose	Shiawassee	Richard Kasowski	Nanci Hengesbaugh
Round	Benzie	Jane Perrino, Jodi Monteith	
Round	Charlevoix	Shelby Harris	
Round	Lenawee	Joette Collins	
Round	Mecosta	David Lewis	
Round	Oakland	Paulette Wcisel	
Round	Shiawassee	Richard Kasowski	Nanci Hengesbaugh
Sand	Lenawee	Pete Macauley	
School Section	Mecosta	Kris Karcher	
Scram	Kent	Randy Kaja	

Sears	Oakland	John Anton	
Second Fortune	Iron	Steve Peterman	
Selkirk	Allegan	Barbara Muth	
Seymour	Oakland	David Wilson	Brandie Stock
Shavehead	Cass	Jack DeLee	
Shingle	Clare	Dennis Zimmerman	
Silver	Genesee	Douglas Pohlod	
Silver	Van Buren	Ron Kreiger	
Silver (Dexter Twp)	Washtenaw	Sue Bade	Tim Zaleski, Terry Zaleski
Spider	Grand Traverse	Gary Gibson	Curtis Bedbury, Linda Deneen, Bob Deneen
Square	Oakland	Mark Kolkmeyr	
Squaw	Kalkaska	Shawn Brozovich	
Squaw	Kalkaska	Tina Peterson	Jim Owens
Stager	Iron	Thomas Madden	
Stanley	Iron	John Reed	Angie Stine
Star (Big)	Lake	Bernard Woltjer	
Starvation	Kalkaska	Tina Peterson	
Stony	Oceana	John Stivers	
Stony Creek Lake	Macomb	Erik Frederiksen	
Sunset	Iron	Michael Golas	
Sunset Lake	Kalamazoo	Noreen Heikes	
Swan	Iron	Thomas Ollila	
Sylvan	Newaygo	Kellie Willson	
Sylvan	Oakland	Deborah Emmer	Kim Yeip
Tamarack	Livingston	Jon Waitz	Jim Meyer
Theresa	Oakland	Alicia Digirolamo	
Thread	Genesee	Sarah Scheitler	
Tie	Alger	Joanne Saari	
Town Line (Ranger)	Otsego	Curt Horvath	
Triangle	Livingston	Kathy Alward	
Tubbs	Mecosta	Patricia Jarrett	
Twin	Oakland	Benjamin VanderWeide	
Twin (Big)	Kalkaska	Tina Peterson	Marv Kingsley
Twin (East)	Montmorency	John Jackson	
Twin (Little)	Kalkaska	Tina Peterson	Ellen Whitehead
Twin (West)	Montmorency	Jerry Beattie	
Twin Lakes	Oakland	Benjamin VanderWeide	Grant Vander Laan, Parker Maynard, Katrianna Studtmann, Maxwell Dunn

Union	Branch	William Courliss	
Van Etten	Iosco	Dan Stock	
Vandercook	Jackson	Daniel Klee	
Viking	Otsego	Bill Hayhow	
Wabasis	Kent	Harold Fullerton	
Wall	Barry	Alan Freid	Kaytlin Perry
West Bay	Gogebic	Loretta Cornfield	Jim Okraszewski
West Maggie	Iron	Bruce Vanenkevort	
White (East)	Muskegon	Chelsey Wabsis	
White (West)	Muskegon	Chelsey Wabsis	
Whitefish (Big)	Montcalm	David Cornelius	
Whitewood	Livingston	Jon Waitz	
Whitmore	Washtenaw, Livingston	Keith Lee	
Windover	Clare	Wayne Kiefer	
Wolf	Lake	Don Klobucar	
Wolf	Muskegon	Bill Wood	
Woodard Lake	Ionia	Michelle Beloskur	
Woods	Kalamazoo	Steven Clark	

VII. 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 meters.

Amber Butterfield (Dickenson County Conservation District)
 Jeff Pytlarz (Lando Center)
 Jean and Jim Roth (Michigan Lakes and Streams Association)

The following EGLE staff:

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

VIII. 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.