TLPOA Spring Membership Meeting

MAY 28, 2022

Agenda

Opening Remarks – Tom Conquest

Pledge of Allegiance

Board Member Introductions

Reports

- Treasurer Report – Wendy Huston
- Membership Report – Tom Page
- Social Media / Website – Bill Siegrist
- TLPOA Newsletters – Pat Kish
- East Twin Aeration – Tim Mangenello
- EWM Management – Tom Conquest
- CLMP / Water Clarity – John Jackson
- Wine & Cheese Party – Pete Stephens
- Petoskey & Ott Boat Parades – Dominic Manzi

Open Forum (Q&A)

Adjourn

Treasurer Report

WENDY HUSTON

Calendar Year 2021

	Total TLPOA	General Fund	Aeration Fund	EWM Fund
Beginning Balance (1/1/2021)	165.7	53.4	8.9	103.4
+ Deposits	38.0	29.7	8.3	-
- Expenditures	18.9	6.0	7.4	5.4
Ending Balance (12/31/2021)	184.8	77.1	9.7	98.0

Values in $K

Current 2022

	Total TLPOA	General Fund	Aeration Fund	EWM Fund
Beginning Balance (1/1/2022)	184.8	77.1	9.7	98.0
+ Deposits	16.6	12.3	4.3	-
- Expenditures	7.5	3.7	3.8	-
Ending Balance (5/24/2022)	194.0	85.7	10.2	98.0

Values in $K

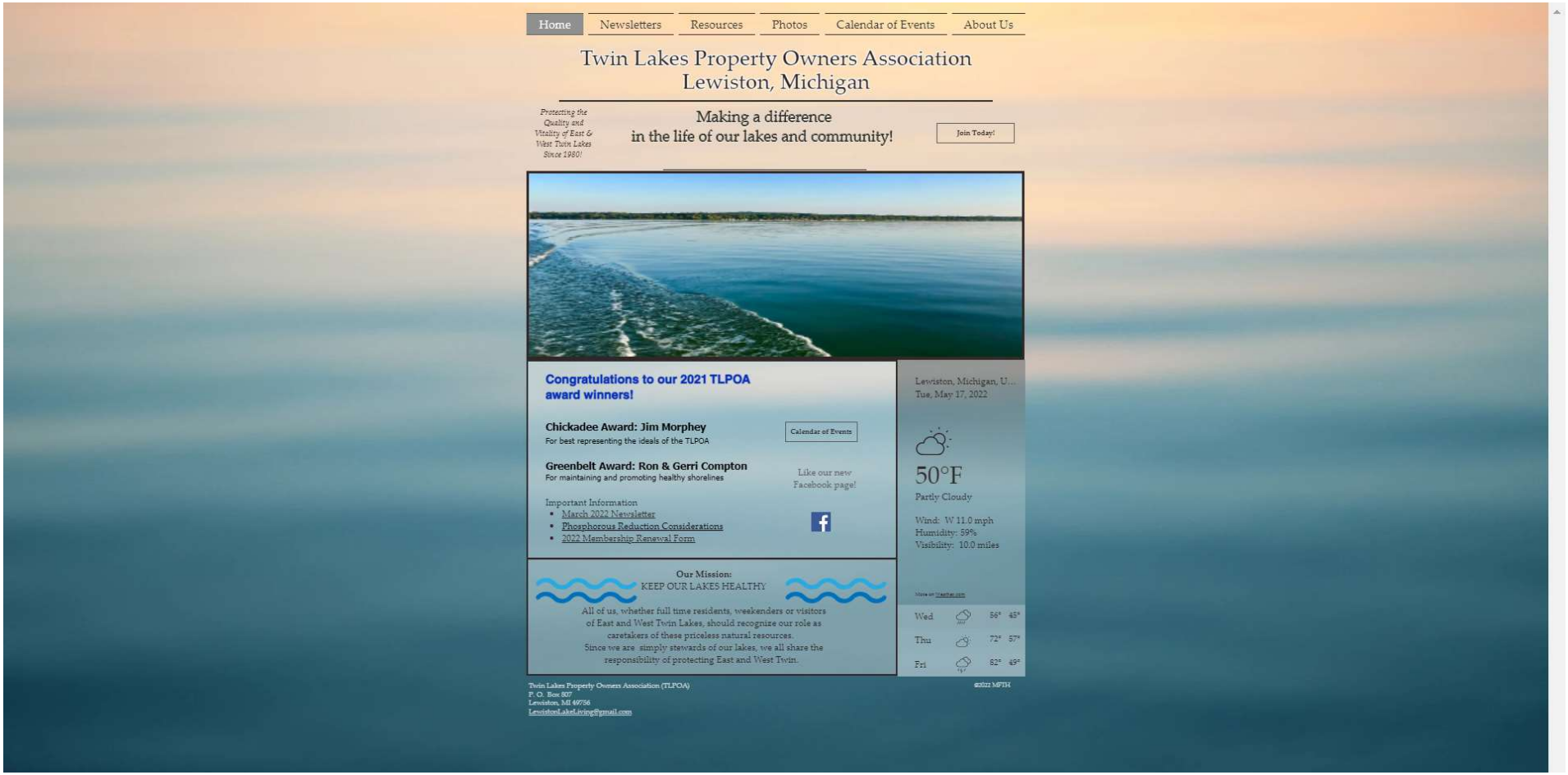
Membership Report

TOM PAGE

	Total Members	Lake Stewardships	Family Memberships
May ‘22	325	153	172
May ’21	252	119	133
May ‘19	277	104	173

Social Media / Website

BILL SIEGRIST



https://www.tlpoalewistonmi.com

>>> Please check your newsletter mailing label for your current membership status. <<<

2022 TLPOA Membership Dues and Donations

☐ *New* ☐ *Renewal*

Member Name(s) _____

Email Address(es) _____

Primary Mailing Address _____

City _____ **State** _____ **ZIP** _____

Lake Address _____

Telephone ( ) _____ ☐ **East Twin Lake** ☐ **West Twin Lake**

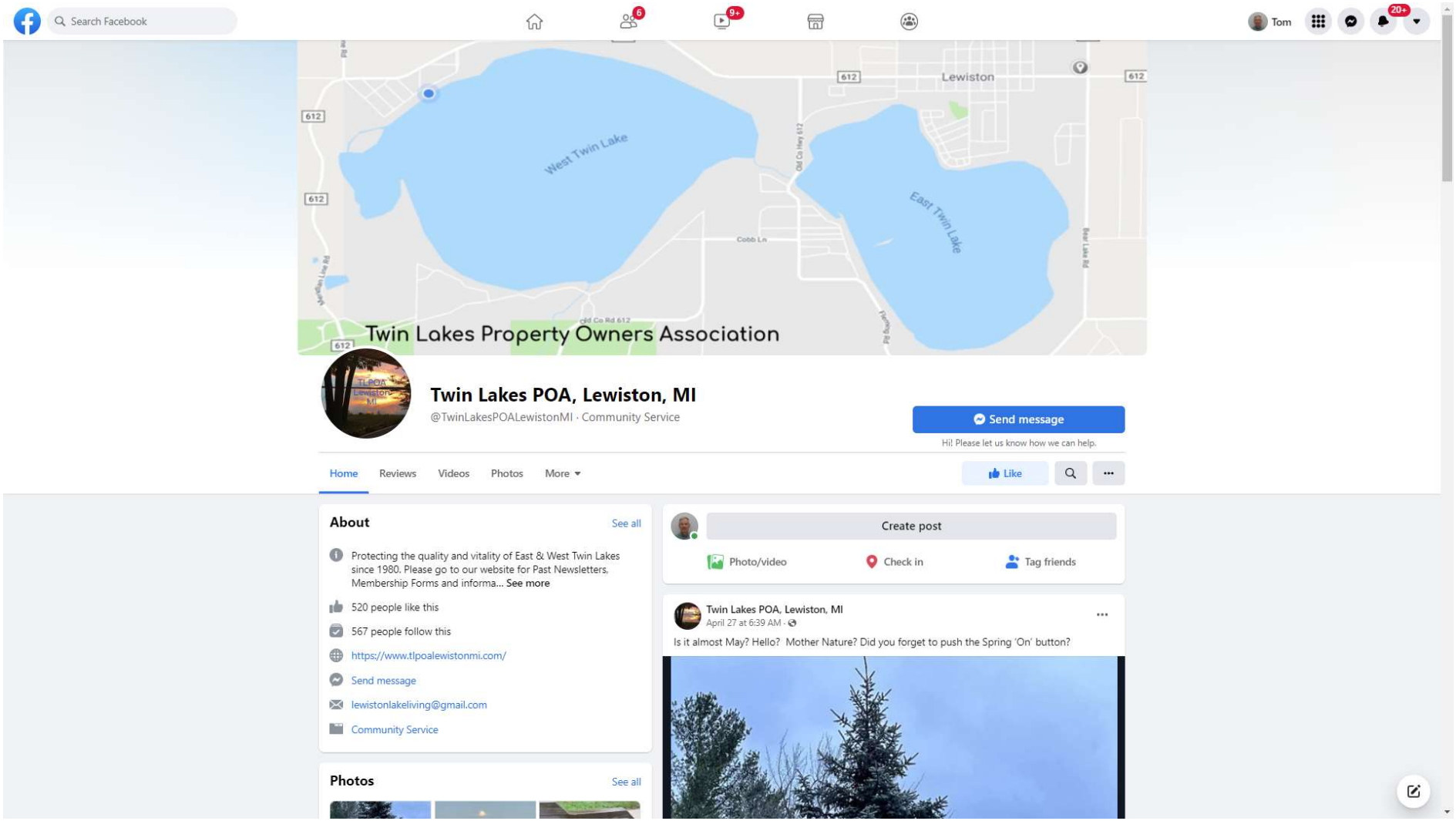
2022 Membership Dues and Donations

	Membership Dues or Suggested Contribution Amounts	*My Lake Contribution*
Membership Dues Lake Stewardship provides additional funding for special projects to study and maintain a healthy lake ecology and benefit the lake community.	$150 Lake Stewardship or $35 Basic Family Membership	$
Aeration Suggested Contribution Your contribution will allow the TLPOA to maintain the aeration system on East Twin Lake, including replacing parts as needed, and paying for electricity. Suggested contribution rates based on lake frontage owned are shown at right. We welcome all levels of contribution!	**Lakefront Owners** Less than 75 ft. of lake frontage $50 75 to 125 ft. of lake frontage $75 More than 125 ft. of lake frontage $100 **Shared Access** $25	$
Eurasian Watermilfoil Treatment Generous contributions from our membership along with grants from Montmorency County have allowed the TLPOA to respond quickly to control EWM and have covered the anticipated costs of surveying and treating infested areas.	**We are currently funded at a sufficient level to meet current needs and have suspended our requests for funding for 2022. Thank you!**	
	MY TOTAL LAKE CONTRIBUTION	$

THANK YOU FOR YOUR GENEROUS SUPPORT! PLEASE MAIL TODAY!

The TLPOA is a 501(c)(3) public charity and your contribution may be deductible if you itemize your deductions on your tax return. Consult your tax adviser for details.

Please make your check payable to TLPOA and mail to
P.O. Box 807, Lewiston, MI 49756



https://www.facebook.com/TwinLakesPOALewistonMI/

TLPOA Newsletters

PAT KISH

TLPOA Newsletters

Newsletter mailed each Quarter (4x/y) to home addresses

Each issue is posted on web-site

Annual costs (printing, postage, sealers, labels) under $2,000

Contents

- President's letter
- Quarterly financial
- Membership renewal
- Upcoming events
- Program update articles (e.g. Aeration)
- Education

Feedback from membership always welcome

East Twin Aeration

TIM MANGANELLO

East Twin Aeration

“THANK YOU TO ALL CONTRIBUTORS to the Aeration System “

The aeration system was turned on in early May and all functions are working.

All compressor air filters were replaced by Dominic and Tim.

All 24 diffusers were professionally cleaned on May 17th by Clean Flo.

Like last year, a bottom hardness scan was performed to show a color chart bottom hardness comparison from year to year.

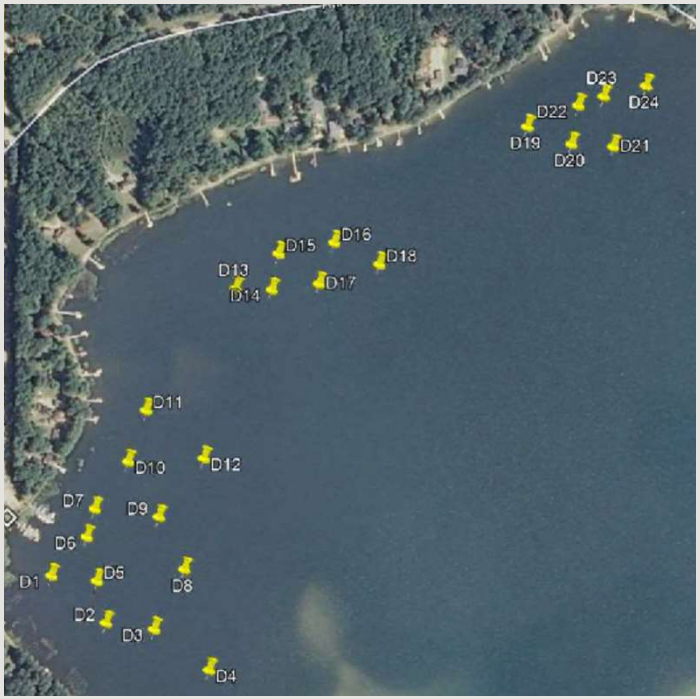
We will continue these scans annually for a comparison of bottom hardness and muck reduction progress in the aeration area.

The comparison charts will be shown at the August Membership meeting and placed on the Lake Association website.

2022 Aeration Estimated Expenses

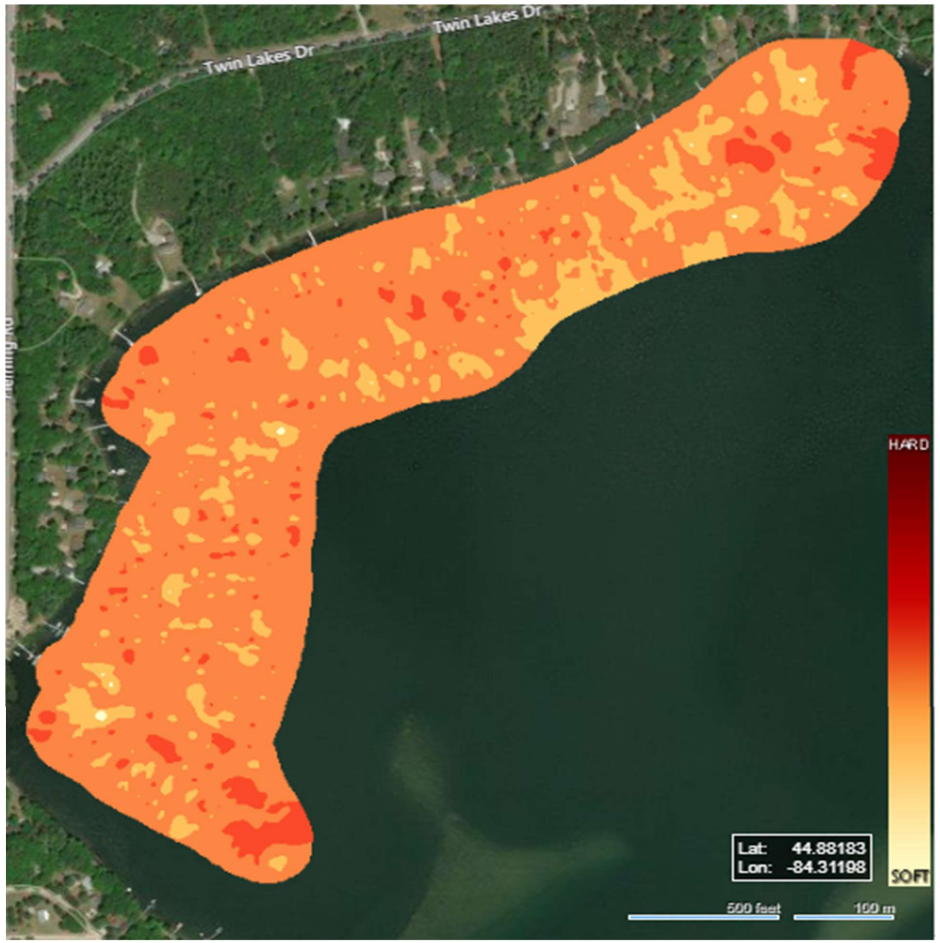
Annual Expense	Amount
Electricity	$4,000
Maintenance/Cleaning	$3,000
Miscellaneous	$1,000
Total	$8,000

THANK YOU AGAIN TO ALL AERATION SYSTEM CONTRIBUTORS!



East Twin Lake
Aeration Locations

Bottom Hardness Scan from May 2021



EWM Management

TOM CONQUEST

EAPW Watch List Species

Eurasian Watermilfoil– *Myriophyllum spicatum*

Allison Fox, University of Florida, Bugwood.org

1 INCH

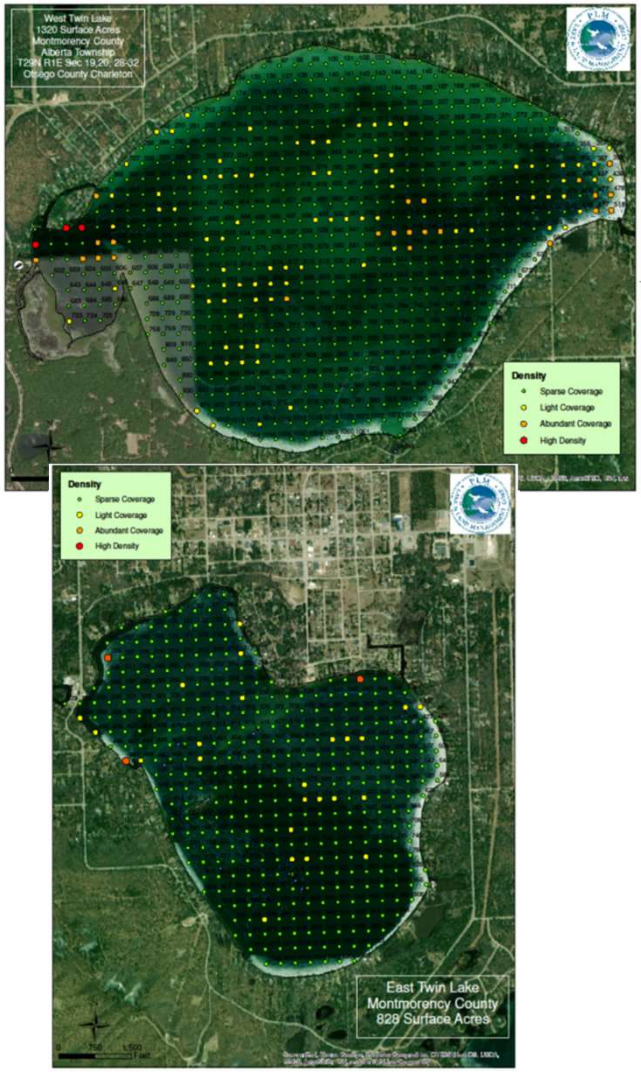
1 INCH

EWM Treatment Schedule

Week of June 13: Initial survey & first herbicide treatment

Week of August 8: Second herbicide treatment

If necessary, a third treatment can be scheduled for September



Aquatic Vegetation Acoustic Survey

- Images represent surveys conducted by PLM Lake & Land Management in 2020
- Surveys scheduled for both lakes in late summer 2022
- Plan is to conduct surveys every two years to track vegetation changes in both lakes

EWM Financials

2021 expenditures of $5,391

2022 Budget

- $5,000 for EWM treatment
- $5,500 for AVAS surveys

CLMP / Water Clarity

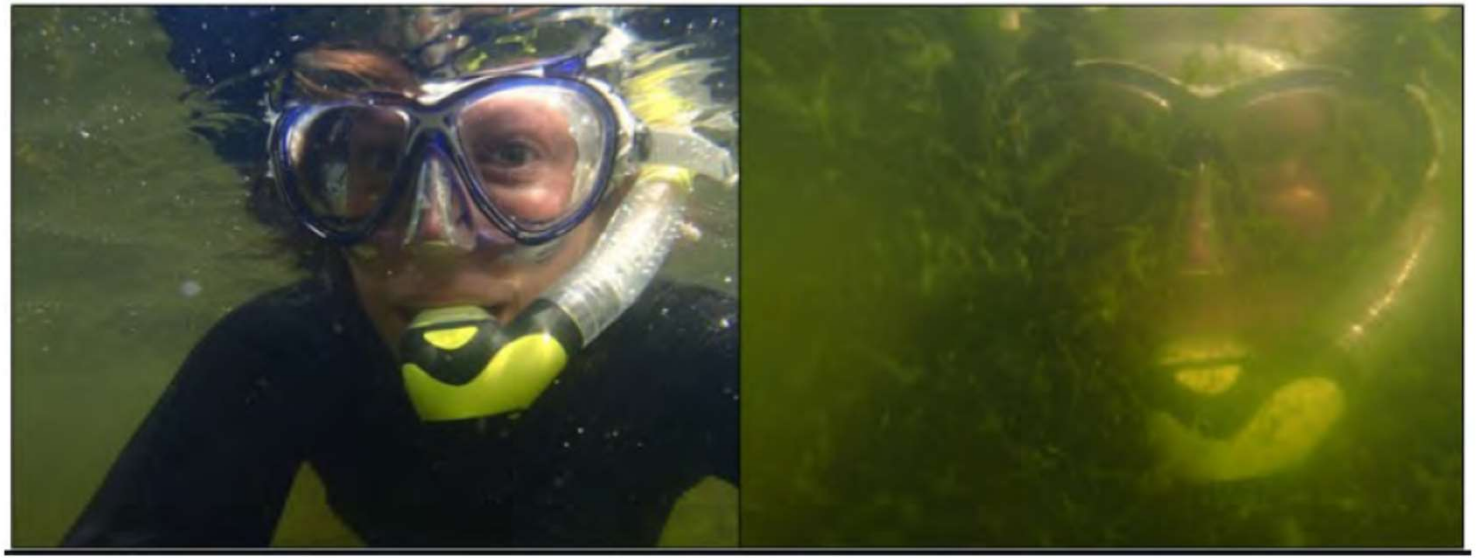
JOHN JACKSON

What is the Cooperative Lake Monitoring Program (CLMP)?

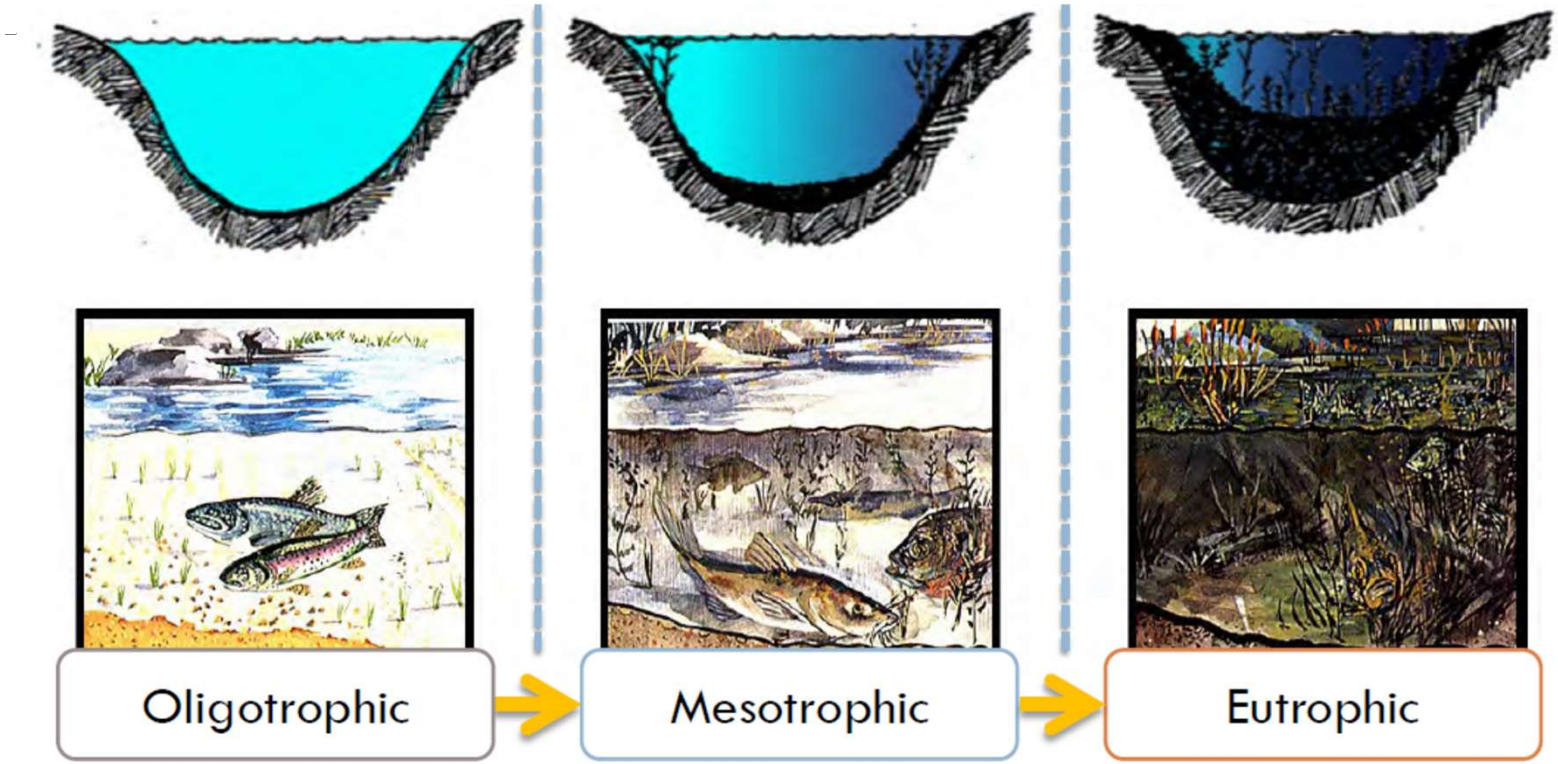
- ✓ CLMP is the lake monitoring portion of the Michigan Clean Water Corps
- ✓ It includes local volunteers, EGLE staff, MSU Extension staff, Huron River Watershed Council and Michigan Lakes and Streams staff
- ✓ Myself (East Twin) and Jerry Beattie (West Twin) are the current TLPOA volunteers
- ✓ Erick Elgin (MSU) is the staff scientist who mentors the statewide lake volunteers
- ✓ TLPOA has participated in the CLMP for 29 years (1993)
- ✓ CLMP has actively monitored lakes in Michigan for 48 years (1974)
- ✓ It is the second oldest citizen scientist statewide lake monitoring program in the US
- ✓ We currently monitor 3 critical lake parameters
    1. Secchi Disk
    2. Phosphorous (spring and summer)
    3. Chlorophyll A
- ✓ These are the parameters that determine the lake Trophic Status

What does Trophic Status mean?

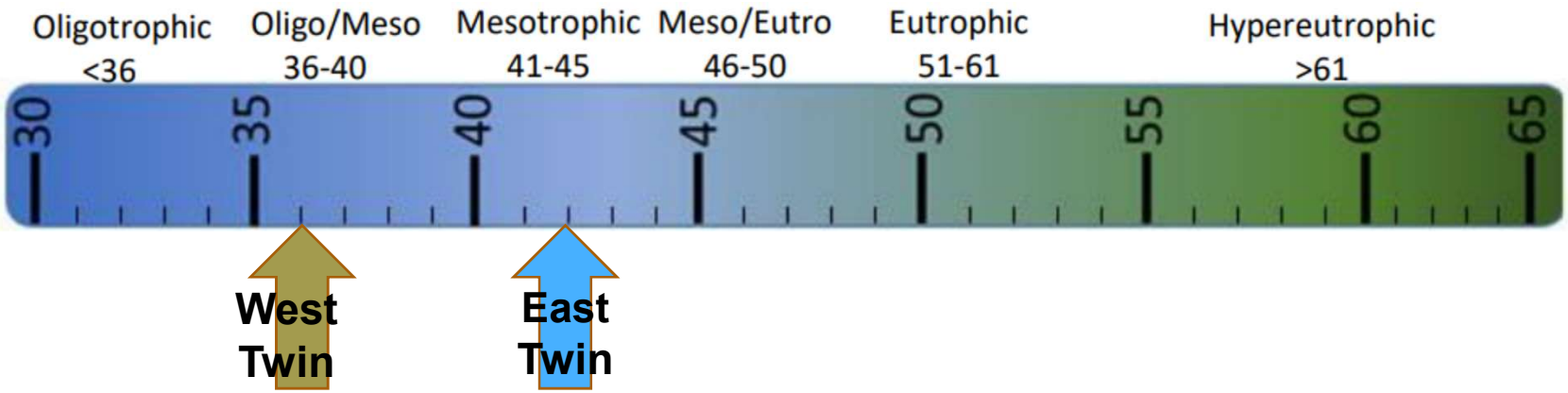
- **Trophic Status:** description of how productive a lake is.
- **Productivity**: the amount of plant or animal life that a lake can support



Trophic Status also describes the lake lifecycle stages



What are our Trophic Index's



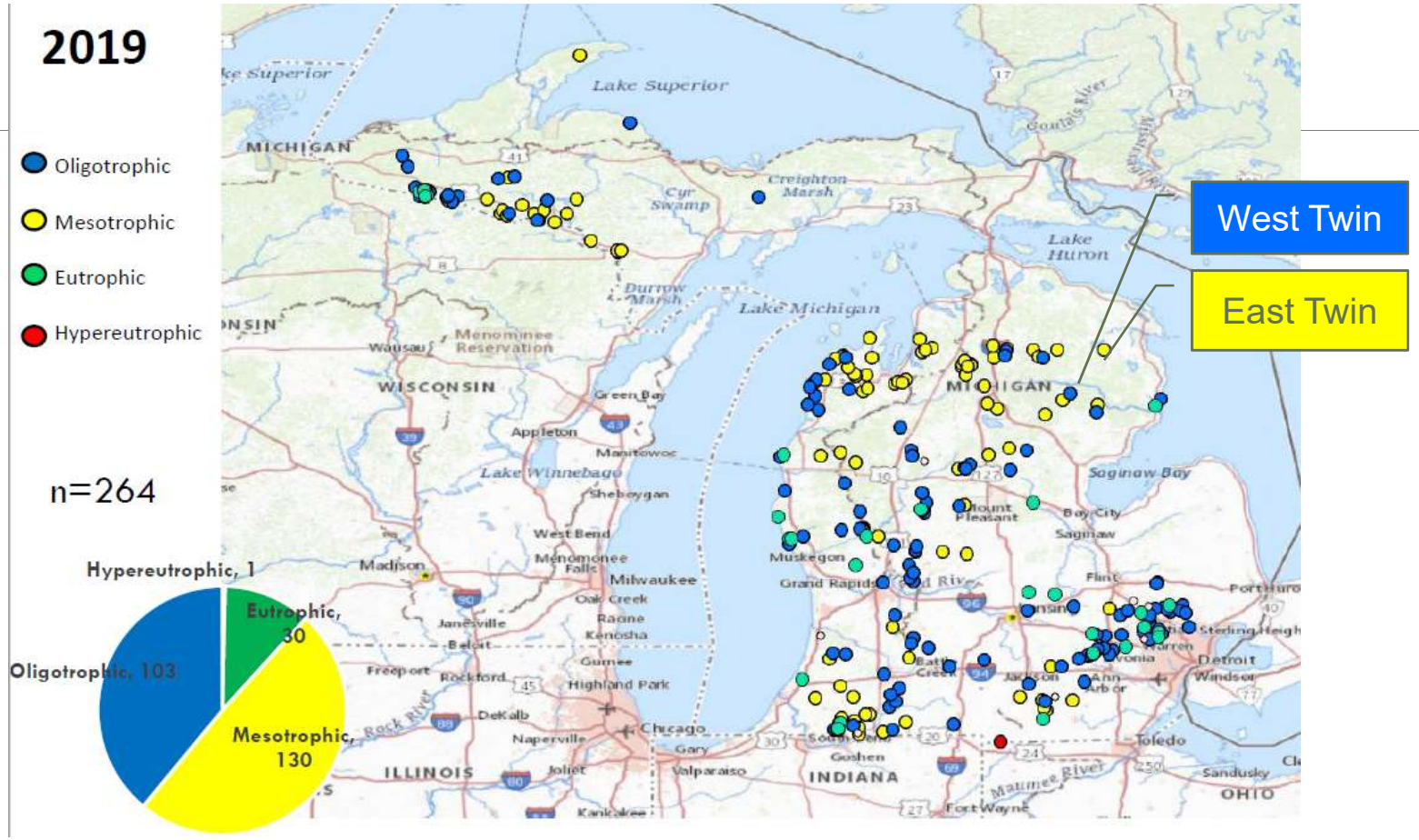
Oligotrophic: Generally deep and clear lakes with little aquatic plant or algae growth. These lakes maintain sufficient dissolved oxygen in the cool, deep-bottom waters during late summer to support cold water fish, such as trout and whitefish.

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

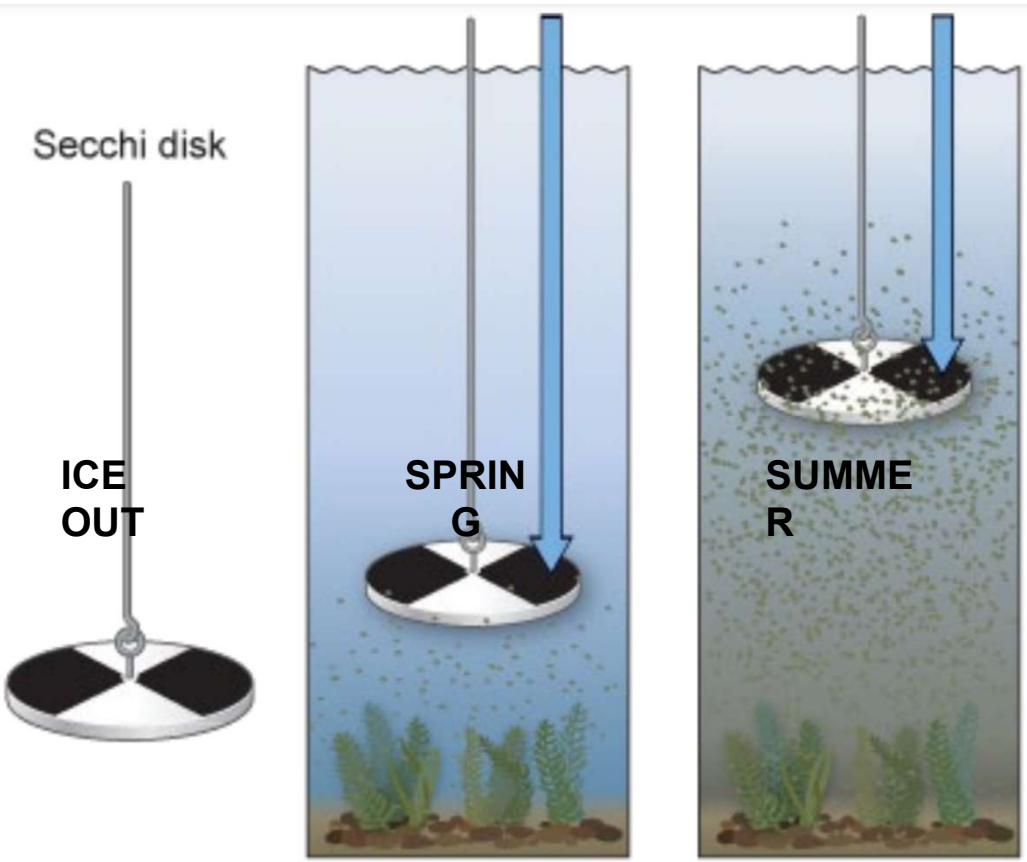
Eutrophic: Highly productive eutrophic lakes are generally shallow, turbid, and support abundant aquatic plant growth. In deep eutrophic lakes, the cool bottom waters usually contain little or no dissolved oxygen. Therefore, these lakes can only support warm water fish, such as bass and pike.

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

Lake Trophic Status Across Michigan

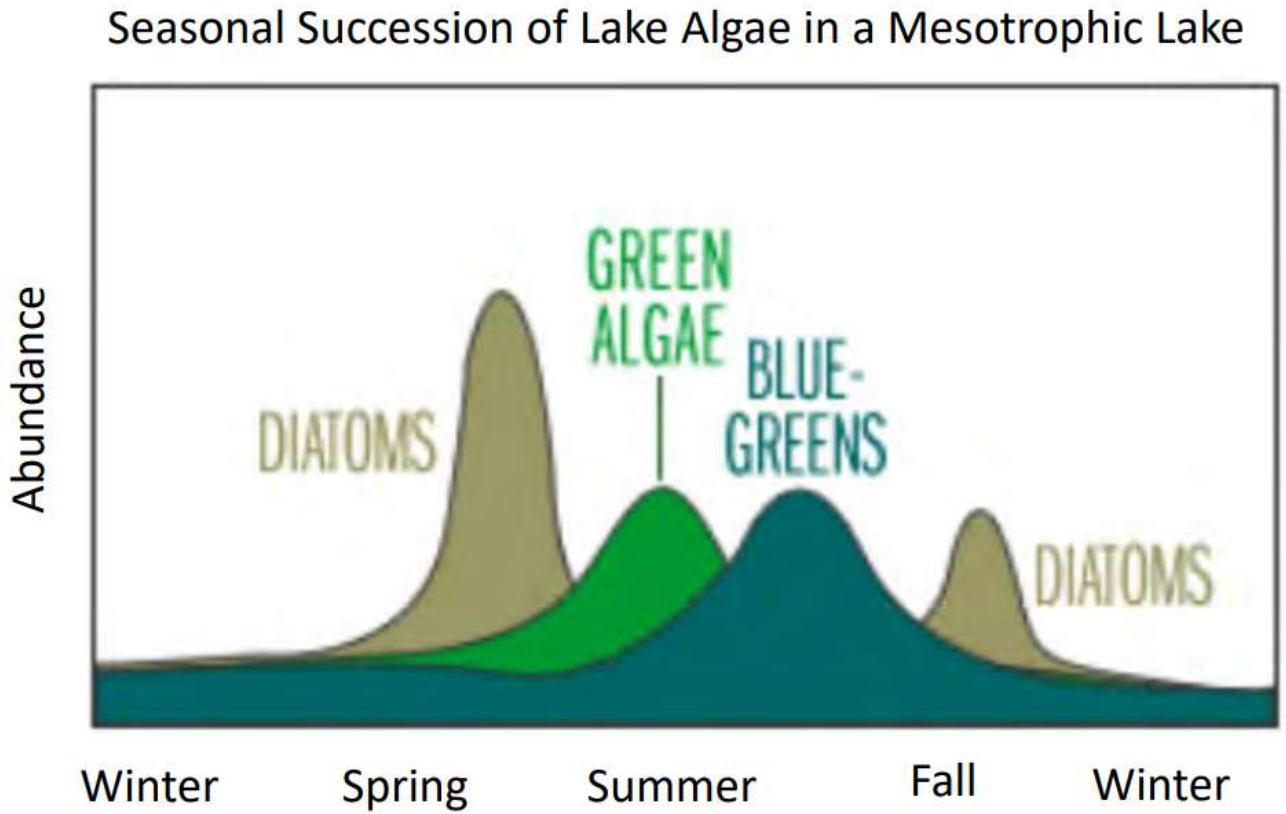


East Twin Water Clarity Update



- Water clarity is affected by
  - Water color
  - Algae
  - Suspended solids (organic, sediment, etc…)

Why Does Water Clarity Change during the Seasons?



East Twin Secchi Disk Archive

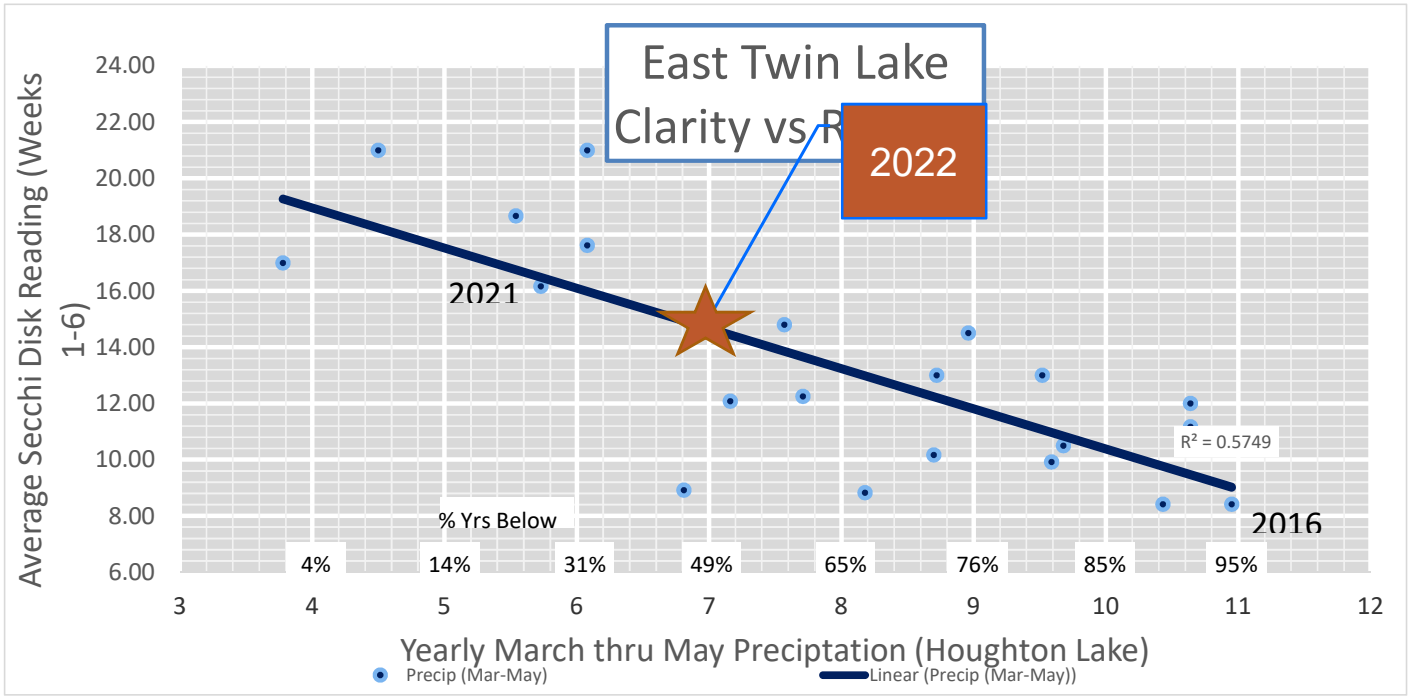
Week of 2022	CLMP Week	1993	1995	1996	1998	2002	2004	2009	2014	2015	2016	2017	2018	2019	2020	2021	2022	Ave	Feet	Trophic Classification
2-May	-1	21												11			14	15.8	22	Oligotrophic
9-May	0	19		18				10.5					10.5	10.5		13.5	14.5	13.7	21	Oligotrophic
15-May	1					12.5	14			10	10.5	9.5	9.5	10	13	14	14	13.4	20	Oligotrophic
22-May	2	21	18	19.5	16.5	11		10	11.5	9.5	10	9	9.5	10	12.5	15	14	12.7	19	Oligotrophic
29-May	3				14.5	10	14		11	9.5	9	8.5	9.5	9.5	13.5	13.5		12.0	18	Oligotrophic
5-Jun	4		18	19.5	15.5	12		11		9.5	7.5	8.5	8.5	10	11.5	15.5		12.1	17	Oligotrophic
12-Jun	5		18		15.5	15.5			10	7.5	7	8	8.5	9.5	11.5	21.5		11.8	16	Oligotrophic
19-Jun	6	21	16.5	17	12	1										7.5		11.9	15	Oligotrophic
26-Jun	7				10.5	11	15		12		6.5	6.5	7	9.5	9	12		10.1	14	Oligotrophic
3-Jul	8	16	15		9	11.5		9		6.5	6.5	6	6.5	8.5	9	11.5		10.1	13	Mesotrophic
10-Jul	9		9	10.5	9	11	12			7	6.5	5.5	6	6	8	9		9.0	12	Mesotrophic
17-Jul	10	11			10.5	10.5		10.5	10		7	6		6	6.5	11		9.6	11	Mesotrophic
24-Jul	11		9.5		10.5	10	11		11.5	6	7.5	5.5	6.5	6.5	7	11		9.2	10	Mesotrophic
31-Jul	12	15		10	10	11.5		10.5	10	5.5	8.5	6	6.5	6.5	7.5	10		9.6	9	Mesotrophic
7-Aug	13				9.5	11	7		9.5	5.5	9.5	6.5	6.5	7	8	9		8.5	8	Mesotrophic
14-Aug	14	13	9	10	9.5	10.5		9.5		5.5	10	6.5	6.5	7	8	9		9.0	7	Mesotrophic
21-Aug	15		9	10.5	12	7	7.5		10	6.5	9.5	6.5	7	7	8	9		8.5	6	Eutrophic
28-Aug	16	11.5	9		13	9.5		9	9.5	6.5	9.5	6.5	6.5	7	8.5	11		9.0	5	Eutrophic
4-Sep	17	11.5	10.5	17		10	7		10	6.5	10	6	8	7	9	10		9.1	4	Eutrophic
11-Sep	18	12	10.5	13.5	10	10.5		10		6.5		9	9	7.5	9.5	9		9.7	3	Hypereutrophic
18-Sep	19		12.5	15		11	8.5		10		11	7.5	9.5	8.5	10	10		10.3	2	Hypereutrophic
25-Sep	20				13			9.5	12									11.4	1	Hypereutrophic
	Ave	**14.7**	**12.7**	**14.3**	**11.8**	**10.9**	**10.7**	**9.9**	**10.5**	**7.2**	**8.5**	**7.1**	**7.7**	**8.1**	**9.5**	**12.1**	**14.1**	**10.4**		

Best Reading ever recorded

Best Ave since 1996

First reason for East Twin Water Clarity Improvement

✓Lower precipitation during the winter reduced watershed input and reduced spring rainfall resulted in reduced ***stormwater runoff***



Second reason for East Twin Water Clarity Improvement

✓Spring Clear Water Phase ***due to Daphnia (zooplankton)***

Alternate states

- 1) High algae
  - Bad water quality
- 2) High zooplankton
  - Good water quality

Trophic Cascad

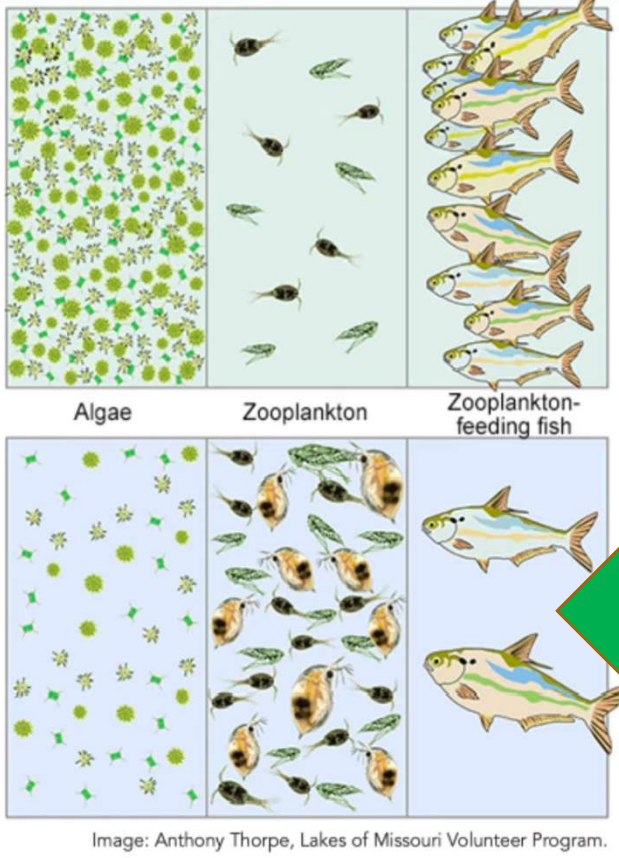


Image: Anthony Thorpe, Lakes of Missouri Volunteer Program.

What will be different this year?

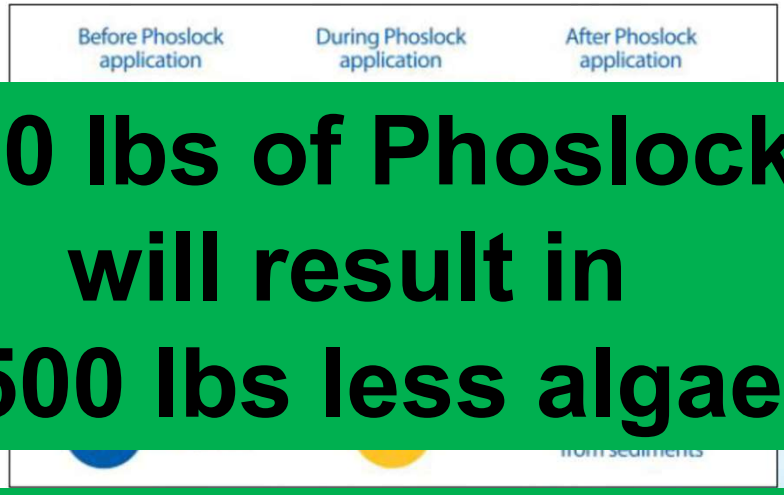
- ✓ Use PhosLock strategically in the high Phosphorous East Twin canal
- ✓ First application Mid June, second August

What is Phoslock?

Phoslock®
Phosphorus Locking Technology

A natural technology that inactivates bio-available phosphorus & restores water quality

- 95% Bentonite Clay
- 5% Lanthanum
  - "Element #57"
- 100 lbs. of Phoslock will bind 1 lb. of FRP
- 1 lb. of Phosphorus can support 500 lbs. of algae



700 lbs of Phoslock will result in 3500 lbs less algae

Similar applications have made dramatic improvements in Houghton Lake

What can happen when you reduce Phosphorus!

Wine & Cheese Party

PETE STEPHENS

Save the Date
Friday, August 19

Twin Lakes Shore Resort on West Twin Lake

3255 Hyek Drive, Lewiston (off County Road 612)

6:00 PM

Bring 2 bottles of your favorite wine

Cheese tray provided

Bring finger food if convenient

Hosted by Pete & Susan Stephens

Pete Petoskey & Raietta Ott Independence Day Boat Parades

DOMINIC MANZI

Saturday, July 2 at 5:00 PM for both lakes

West Twin: Starts at Eagle Point

East Twin: Starts just east of island

Open Forum (Q&A)

Let us know at:

LewistonLakeLiving@gmail.com

Or contact any one of our Board Members.

Tom Conquest
boiler15@att.net
616-204-9292

Adjourn