

# Miner Lake Association

Spring Meeting 2014

May 24, 2014

Please see Helen to pay your 2014 Dues

# Agenda

- Opening Business
- Square Nail Farm Presentation
- Public Comments / Topics of Discussion
- 2013 Water Quality Monitoring Report
- Miner Lake Improvement Board – Project Renewal
- Allegan Township Recreation Plan – East End
- Natural Gas
- 2014 Pontoon Parade
- Miner Lake Dam Replacement
- Election of Officers



# Recognition of Memorial Day

Remember this holiday weekend is not just about the “Start of Summer”, but rather the memory of those who have fought and died to protect and preserve our freedom.

# Opening Business

- Review minutes
- Treasurers report

# Square Nail Farm Market

Mark Gabala

2437 118<sup>th</sup> Ave  
Allegan MI 49010



# Public Comments / Topics

# 2013 Water Quality Monitoring

As with the 2012 data, phosphorus levels in the upper waters of the lake were relatively low and open-water algae growth at the time of sampling was minimal. However, water transparency was reduced compared to 2012 (13 feet in 2012 and 6 feet in 2013), and two of the shoreline sampling locations had slightly elevated *E. coli* levels. During the plant survey, two exotic species were found in the lake, Eurasian milfoil and starry stonewort.

Overall, the water quality in Miner Lake is reasonably good, but you may want to consider steps in the future to ensure that Eurasian milfoil and starry stonewort do not gain dominance in the lake.

# Water Sampling Locations

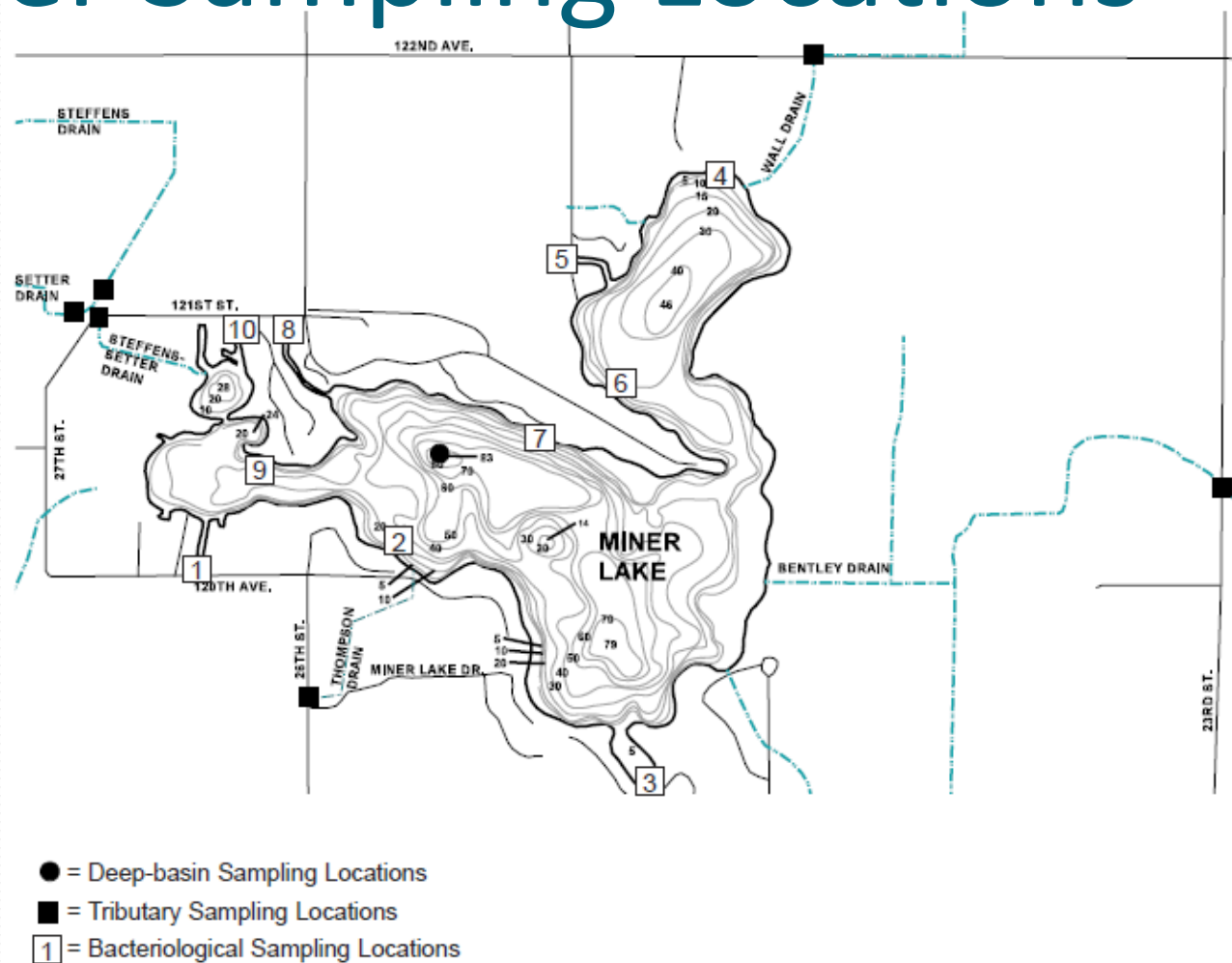


Figure 1. Miner Lake sampling location map.



# Summary Statistics

## MINER LAKE 2013 SURFACE WATER QUALITY DATA

Date	Secchi Transparency (feet)	Chlorophyll-a ( $\mu\text{g/L}$ ) <sup>2</sup>
26-Apr-13	6.0	2
22-Aug-13	6.0	0

# MINER LAKE 2013 DEEP BASIN WATER QUALITY DATA

Date	Sample Depth (feet)	Temperature (°F)	Dissolved Oxygen (mg/L) <sup>1</sup>	Total Phosphorus (µg/L) <sup>2</sup>	pH (S.U.) <sup>3</sup>	Total Alkalinity (mg/L as CaCO <sub>3</sub> ) <sup>4</sup>
26-Apr-13	1	45	7.9	14	8.4	172
26-Apr-13	10	45	9.8	17	8.4	171
26-Apr-13	20	45	11.2	10	8.4	169
26-Apr-13	30	45	10.6	19	8.4	167
26-Apr-13	40	45	9.9	13	8.4	169
26-Apr-13	50	44	8.8	15	8.3	171
26-Apr-13	60	44	10.3	13	8.4	175
26-Apr-13	70	44	10.7	15	8.4	174
26-Apr-13	80	44	9.7	86	8.3	175
22-Aug-13	1	77	10.2	<5	9.3	150
22-Aug-13	10	74	10.8	<5	9.2	153
22-Aug-13	20	56	1.2	7	7.9	177
22-Aug-13	30	48	2.0	<5	8.1	175
22-Aug-13	40	46	2.2	<5	7.9	174
22-Aug-13	50	45	0.8	6	7.9	176
22-Aug-13	60	45	0.5	41	7.9	181
22-Aug-13	70	44	0.4	139	8.0	186
22-Aug-13	80	44	0.9	151	8.1	184

# MINER LAKE 2012 AND 2013 AQUATIC PLANT SURVEY RESULTS

Common Name	Scientific Name	Plant Type	Number of Survey Sites Where Plants Were Found	
			9/5/2012	8/22/2013
Wild celery	<i>Vallisneria americana</i>	Submersed	75	65
Eurasian milfoil	<i>Myriophyllum spicatum</i>	Submersed	78	60
Muskgrass	<i>Chara sp.</i>	Submersed	77	42
Illinois pondweed	<i>Potamogeton illinoensis</i>	Submersed	31	37
Thinleaf pondweed	<i>Potamogeton sp.</i>	Submersed	37	29
Coontail	<i>Ceratophyllum demersum</i>	Submersed	15	36
Water stargrass	<i>Heteranthera dubia</i>	Submersed	21	13
Starry stonewort	<i>Nitellopsis obtusa</i>	Submersed	7	19
Large leaf pondweed	<i>Potamogeton amplifolius</i>	Submersed	12	11
Naiad	<i>Najas sp.</i>	Submersed	3	11
Curly leaf pondweed	<i>Potamogeton crispus</i>	Submersed	6	0
Flatstem pondweed	<i>Potamogeton zosteriformis</i>	Submersed	2	4
Bladderwort-mini	<i>Utricularia sp.</i>	Submersed	2	2
American pondweed	<i>Potamogeton nodosus</i>	Submersed	0	3
Floating leaf pondweed	<i>Potamogeton natans</i>	Submersed	1	0
Northern milfoil	<i>Myriophyllum sibiricum</i>	Submersed	1	0
Waterweed	<i>Elodea canadensis</i>	Submersed	1	0
Duckweed	<i>Lemna minor</i>	Free-floating	0	1
White water lily	<i>Nymphaea odorata</i>	Floating-leaved	27	42
Yellow pond lily	<i>Nuphar sp.</i>	Floating-leaved	36	29
Bulrushes	<i>Scirpus sp.</i>	Emergent	59	58
Cattails	<i>Typha sp.</i>	Emergent	34	39
Swamp loosestrife	<i>Decodon verticillatus</i>	Emergent	18	16
Jewel weed	<i>Impatiens capensis</i>	Emergent	18	1

# Tributary Data

## MINER LAKE 2013 TRIBUTARY WATER QUALITY DATA

Date	Stream	Discharge (cfs) <sup>3</sup>	Total Phosphorus (µg/L) <sup>2</sup>
26-Apr-13	Steffens-Setter Drain	2.5	20
26-Apr-13	Wall Drain	0.5	7
26-Apr-13	Bentley Drain	1.8	21
26-Apr-13	Thompson Drain	0.1	153
22-Aug-13	Steffens-Setter Drain	0.4	<5
22-Aug-13	Wall Drain	0.3	24
22-Aug-13	Bentley Drain	0.3	9
22-Aug-13	Thompson Drain	0.0	258

# E. Coli Samples

## MINER LAKE 2013 SHORELINE WATER QUALITY DATA

Date	Sampling Site Number	<i>E. coli</i> Count/100mL <sup>1</sup>
22-Aug-13	1	2
22-Aug-13	2	5
22-Aug-13	3	<1
22-Aug-13	4	2
22-Aug-13	5	14
22-Aug-13	6	8
22-Aug-13	7	43
22-Aug-13	8	8
22-Aug-13	9	345
22-Aug-13	10	1,300

# Historical Data

**MINER LAKE SUMMARY STATISTICS, 1996-2013**

	<b>Total Phosphorus (<math>\mu\text{g/L}</math>)<sup>2</sup></b>	<b>Secchi Transparency (feet)</b>	<b>Chlorophyll-a (<math>\mu\text{g/L}</math>)<sup>2</sup></b>
Average	50	8.9	2.2
Standard Deviation	83	1.9	2.4
Median	26	8.5	1.3
Minimum	5	6.0	0.0
Maximum	869	13.0	8.2
Number of Samples	188	20	22

# Historical Data - Phosphorus

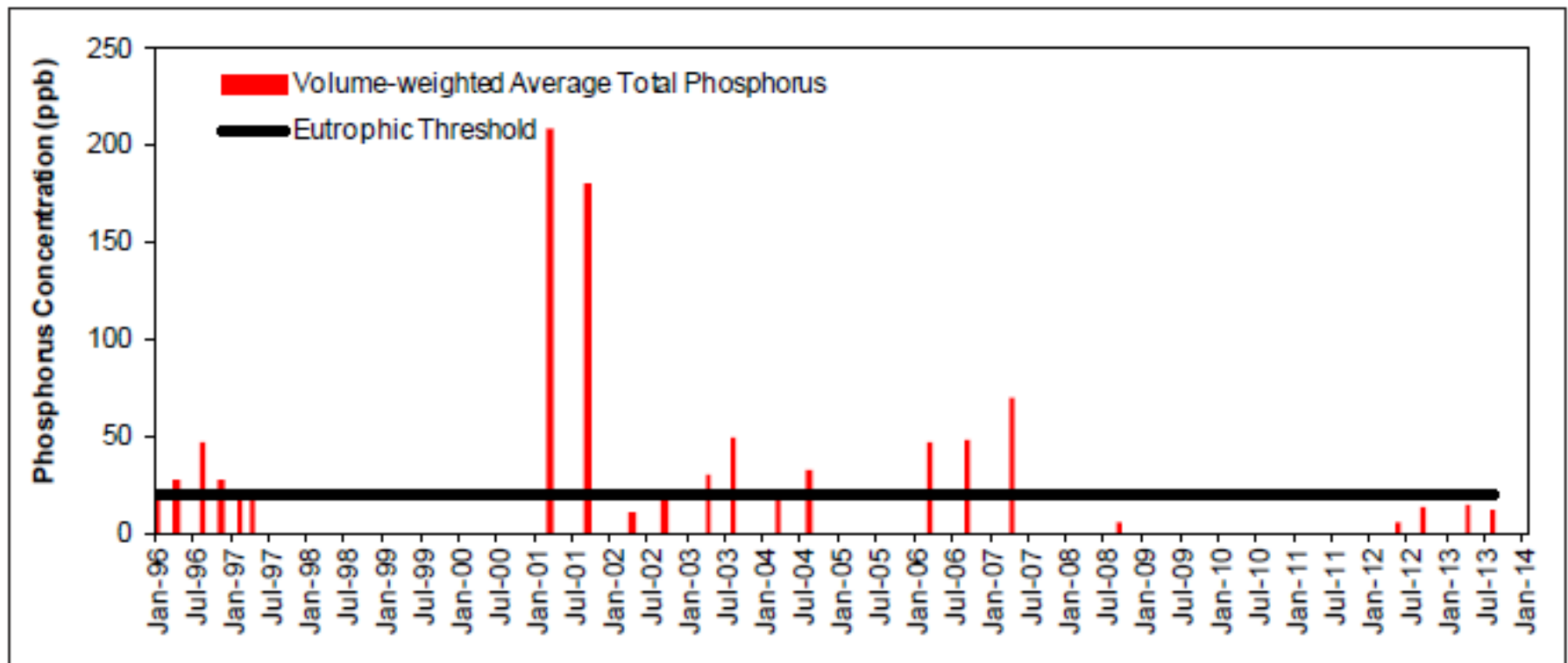


Figure 2. Volume-weighted average total phosphorus concentrations, 1996 - 2013.

# Historical Data - Chlorophyll

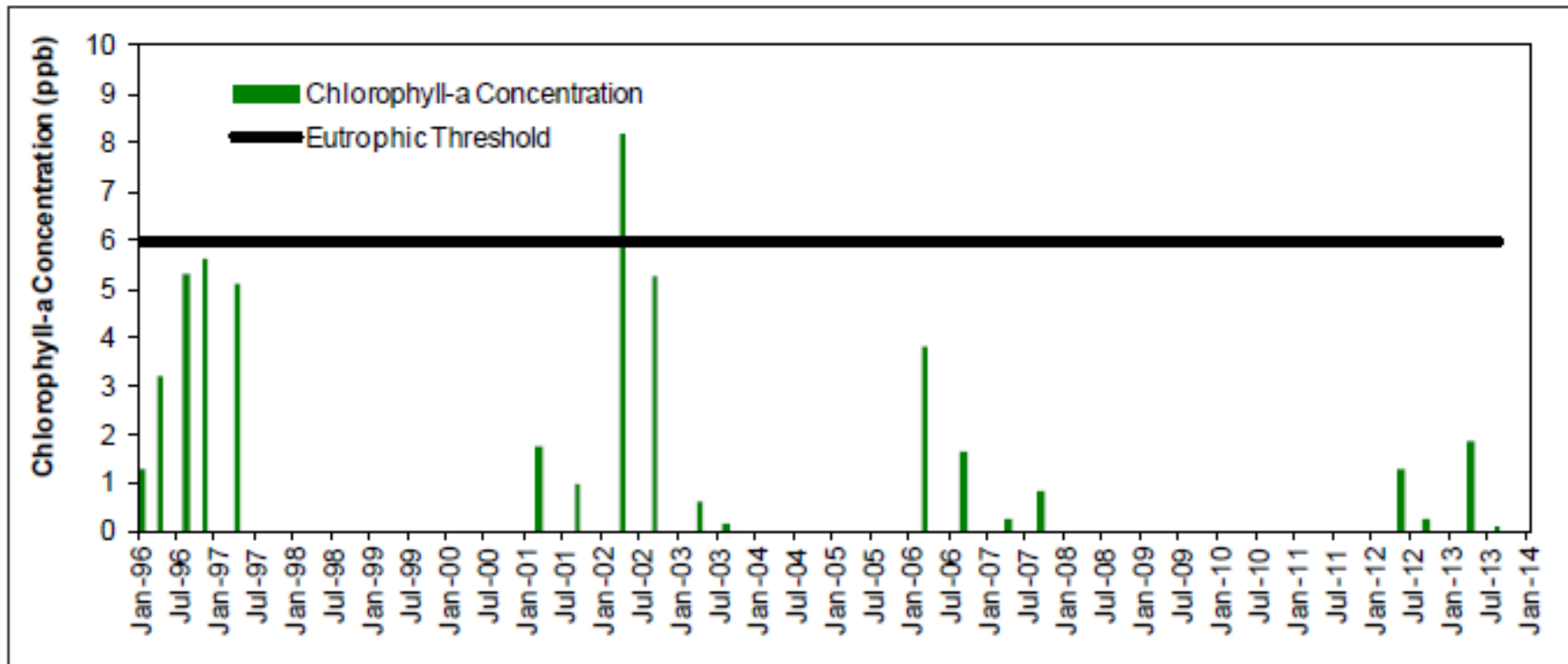


Figure 3. Chlorophyll-a concentrations, 1996 - 2013.



# Historical Data – Water Clarity

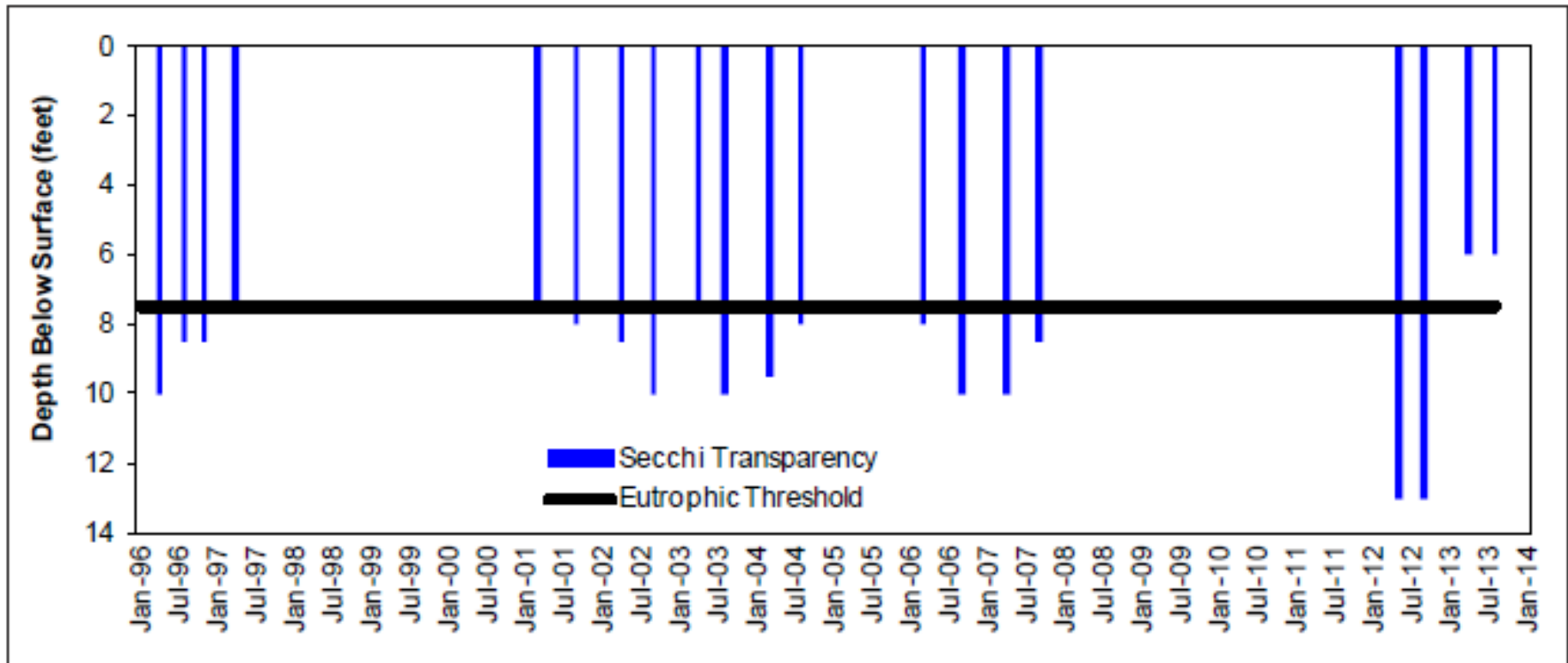


Figure 4. Secchi transparency measurements, 1996 - 2013.

# Water Quality Monitoring

- Renewed contract with ProgressiveAE
- Will not receive individual mailing of report
  - Copy will be on [www.minerlake.com](http://www.minerlake.com)
- Approximately \$2,500 remaining in fund balance at end of this year
- Need to request a new project this summer/fall to continue monitoring and treatment



# Water Quality Monitoring Questions?

# Improvement Board Renewal

- Originally funded 2000-2003 via \$420 assessment
- Fund balance is running low (\$2,500 2014 year end)
- Need to request a new project this summer/fall to continue monitoring and treatment
- Examples of work done:
  - Water Monitoring
  - Weavel placement for Milfoil
  - Check dams on drains

# Improvement Board Renewal

- Need to hold two (2) public meeting to determine the mission of the improvement project
- Project must be settled by early November to be on tax roles
- Improvement board meets again on June 3<sup>rd</sup> 7pm at the Allegan Township Hall to review comments from MLPOA Spring Meeting and set dates for public hearings



# Improvement Board Renewal

Questions / discussion



# Allegan Township Recreation Plan

- Terry Skoglund to provide update



# Interest in Natural Gas



# Pontoon Parade

- Date: Friday, July 4
- Volunteer Coordinator
- Register on Website



# Miner Lake Dam Replacement

- The following details were gathered from conversations with the Allegan County Drain Commissioner's office
- They are informational only as the MLOPA does not have authority over this project
- We were told that because this is a repair/replacement of the existing structure there were not designated public hearings

# Miner Lake Dam Replacement

- The existing dam was built around 1965 and has had some repairs since then
- The dam is a mix of earth and steel sheets that act as a spillway leading to a series of tubes and then to Miner Creek
- Recent inspections revealed that the tubes have significant decay and are close to collapse
- Heavy rain events result in water flowing over the earth portion of the dam and not just the steel sheets

# Miner Lake Dam Replacement

- As far back as 2012, the Drain Commissioner sought permission to begin replacement of the dam
- Evaluations of the existing structure as well as soil samples were obtained
- Preliminary designs made in early 2013
- MDEQ permit received in July 2013
- Final designs and estimates received March 2014
- Drain Commissioner office in process of obtaining easements
- Drain Commissioner office in process of bid letting

# Miner Lake Dam Replacement

- Expect contract to be awarded by mid-July 2014
- Work could begin immediately (contractor discretion), but expected to be completed by end of 2014
- There will be stipulation that contractor must do all possible to maintain the court ordered lake level at all times.

# Miner Lake Dam Replacement

- Estimated project cost is \$312,000 (includes 15% contingency)
- Drain Commissioner indicates there are 269 parcels that will receive an assessment for this project
- Approximately \$1,160 per parcel
- Likely assessed over 5 years
- There will be a published letter to all property owners indicating the assessment and providing a Day of Review date for individual reviews.

# Miner Lake Dam Replacement

- If you have questions, please contact the Allegan County Drain Commissioner:

Denise Medemar

(269) 673-0440

[dmedemar@allegancounty.org](mailto:dmedemar@allegancounty.org)

113 Chestnut St

Allegan, MI 49010

<http://cms.allegancounty.org/sites/Office/Drain/SitePages/Home.aspx>



Meeting Adjourned

Thank you and Happy Memorial  
Day!