

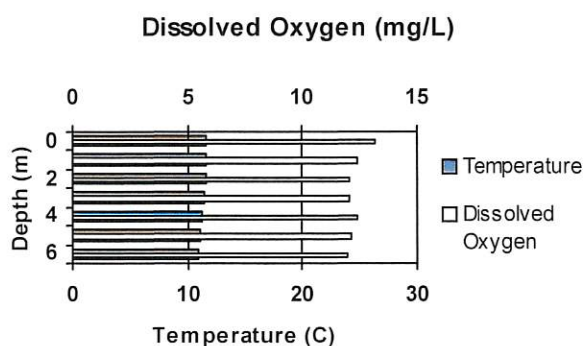
LAKE CHECK Water Quality Monitoring Report

2018070

Customer	Waterbody	Sample Information
Twin Lake (Muskegon)	Twin Lake	Date: 4/30/2018
		Site: deep hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen (mg/L)	
		mg/L	%
0	11.7	13.1	123
1	11.6	12.4	114
2	11.6	12.0	111
3	11.5	12.1	110
4	11.2	12.4	110
5	11.0	12.1	106
6	10.9	12.0	101



Secchi Disk Depth	4.0 meters
Thermocline Depth	meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	122	uS/cm	
Total Dissolved Solids	79	mg/L	Low concentration of dissolved salts
pH	7.8	S.U.	Water is slightly alkaline
Alkalinity	44	mg CaCO ₃ /L	Water is very soft
Total Phosphorus	10	ug/L	Slightly phosphorus enriched
Nitrates	200	ug/L	Not nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	40	mesotrophic
Based on Total Phosphorus	33	meso-oligotrophic
Based on Chlorophyll	N/A	

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Sample is somewhat phosphorus enriched. Create natural buffer between lawn & lakeshore.
- Repeat LakeCheck in Fall.

-
- WARNING. condition requires immediate attention.
 - CAUTION. condition requires further evaluation.
 - OK. condition within acceptable limits.
 - NEUTRAL. condition neither good nor bad.

Notes

Report describes conditions at the time the sample was collected.

Approved by

Jaimee Conroy

Date 10/23/2018

Mrs. Jaimee Conroy, Technical Services Manager

FROM YOUR  DEALER



PLM Lake & Land Management Corp
P.O. Box 132
Caledonia MI 49316-
Phone: (616) 891-1294

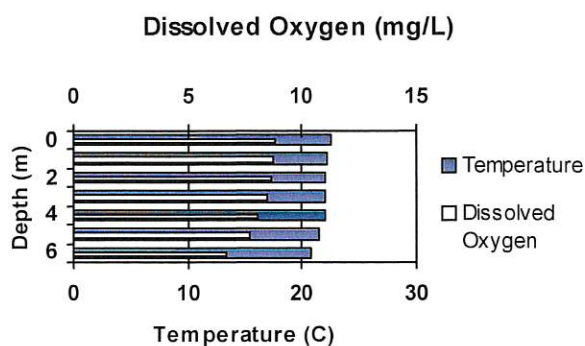
LAKE CHECK Water Quality Monitoring Report

2018131

Customer	Waterbody	Sample Information
Twin Lake (Muskegon)	Twin Lake	Date: 9/14/2018
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen (mg/L)	
		mg/L	%
0	22.5	8.9	90
1	22.2	8.7	89
2	22.1	8.7	88
3	22.0	8.5	86
4	22.0	8.1	81
5	21.5	7.8	79
6	20.8	6.7	68



Secchi Disk Depth	3.8 meters
Thermocline Depth	meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	120	uS/cm	
Total Dissolved Solids	74	mg/L	Low concentration of dissolved salts
pH	8.1	S.U.	Water is slightly alkaline
Alkalinity	45	mg CaCO ₃ /L	Water is very soft
Total Phosphorus	10	ug/L	Slightly phosphorus enriched
Nitrates	200	ug/L	Not nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	41	mesotrophic
Based on Total Phosphorus	33	meso-oligotrophic
Based on Chlorophyll	N/A	

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is adequate for good fish production.
- pH is within acceptable limits.
- Sample is somewhat phosphorus enriched. Create natural buffer between lawn & lakeshore.
- REPEAT LakeCheck NEXT YEAR!

-
- WARNING. condition requires immediate attention.
 - CAUTION. condition requires further evaluation.
 - OK. condition within acceptable limits.
 - NEUTRAL. condition neither good nor bad.

Notes

Report describes conditions at the time the sample was collected.

Approved by

Jaimee Conroy

Date 10/23/2018

Mrs. Jaimee Conroy, Technical Services Manager

FROM YOUR  DEALER



PLM Lake & Land Management Corp
P.O. Box 132
Caledonia MI 49316-
Phone: (616) 891-1294



Bacteria Sampling Report

Waterbody: Twin Lake (Muskegon)
Twin Lake (Muskegon)

Date Sampled:
7/26/2018

Location	<i>E. coli</i>	Total Coliforms	Interpretation
#1	1.0	16	● Water meets bacteriological standards for safe swimming.
#2	1.0	76	● Water meets bacteriological standards for safe swimming.
#3	1.0	1.0	● Water meets bacteriological standards for safe swimming.

Bacterial counts are expressed as the number of Colony Forming Units per 100 milliliters (CFU/100mL).

For full body contact recreation (including swimming) counts of *E. coli* should not exceed 130 (CFU/100mL) as a monthly geometric mean of at least five samples per the State of Michigan standard, or single samples should not exceed 298 (CFU/100mL) [235 CFU/100mL in a designated bathing beach area] per Federal (EPA) guidelines.

Current recreational water quality standards do not rely on Total Coliform counts.

Approved by


Mrs. Jaimee Conroy, Technical Services Manager

Date 30-Jul-18



PLM Lake & Land Management Corp
P.O. Box 132
Caledonia MI 49316-
Phone: (616) 891-1294

