

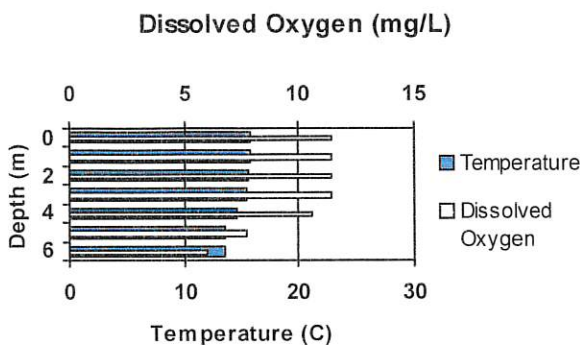


Water Quality Monitoring Report

Customer	Waterbody	Sample Information
Twin Lake (Muskegon)	Twin Lake	Date: 4/26/2017
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	15.8	11.4	116
1	15.7	11.4	115
2	15.7	11.4	115
3	15.5	11.4	115
4	14.6	10.6	104
5	13.6	7.8	77
6	13.5	5.9	58



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	114	uS/cm	
Total Dissolved Solids	74	mg/L	Low concentration of dissolved salts
pH	8.3	S.U.	Water is slightly alkaline
Alkalinity	41	mg CaCO ₃ /L	Water is very soft
Total Phosphorus	13	ug/L	Moderately 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	37	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 12/7/2017

Mrs. Jaimee Conroy, Technical Services Manager

FROM YOUR  DEALER



PLM Lake & Land Management Corp
P.O. Box 132
Caledonia MI 49316-
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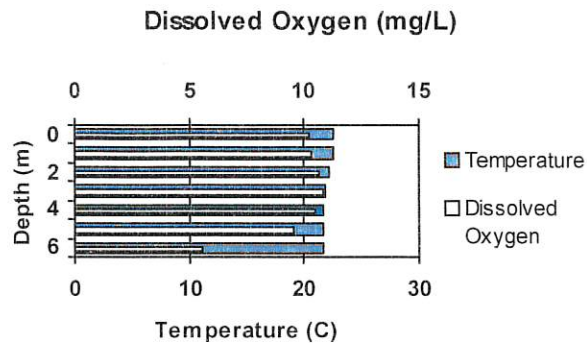


Water Quality Monitoring Report

Customer	Waterbody	Sample Information
Twin Lake (Muskegon)	Twin Lake	Date: 8/30/2017
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	22.5	10.3	119
1	22.5	10.4	120
2	22.1	10.7	123
3	21.9	10.9	124
4	21.7	10.5	119
5	21.7	9.6	112
6	21.7	5.6	62



Secchi Disk Depth 4.6 meters
 Thermocline Depth meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	118	uS/cm	
Total Dissolved Solids	77	mg/L	Low concentration of dissolved salts
pH	8.3	S.U.	Water is slightly alkaline
Alkalinity	70	mg CaCO3/L	Water is soft
Total Phosphorus	22	ug/L	Moderately phosphorus enriched
Nitrates	200	ug/L	Not nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	38	meso-oligotrophic
Based on Total Phosphorus	44	mesotrophic
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 12/7/2017

Mrs. Jaimee Conroy, Technical Services Manager

FROM YOUR



DEALER



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Bacteria Sampling Report

Waterbody:
Twin Lake

Twin Lake (Muskegon)

Date Sampled:
7/27/2017

Location	<i>E. coli</i>	Total Coliforms	Interpretation
#1	4.0	4.0	● Water meets bacteriological standards for safe swimming.
#2	4.0	170	● Water meets bacteriological standards for safe swimming.
#3	4.0	180	● 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 Jaimee C Date 31-Jul-17
Mrs. Jaimee Conroy, Technical Services Manager



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