

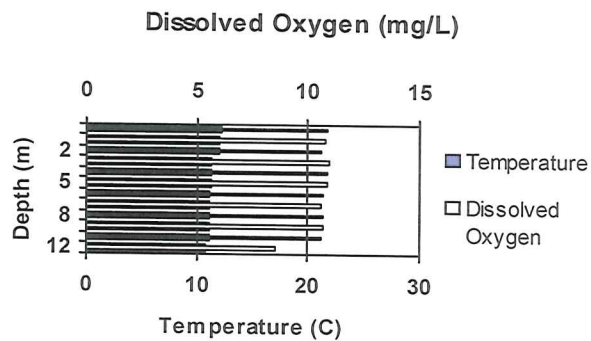
LAKE CHECK Water Quality Monitoring Report

2017408

Customer	Waterbody	Sample Information
Chippewa Lake	Chippewa Lake	Date: 4/17/2017
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	12.3	10.9	100
1	12.1	10.8	100
2	12.0	10.6	99
3	11.4	11.0	101
4	11.3	10.9	99
5	11.3	10.9	99
6	11.2	10.6	97
7	11.2	10.6	97
8	11.1	10.6	97
9	11.1	10.6	97
10	11.1	10.6	96
12	10.8	8.6	77



Secchi Disk Depth 5.6 meters

Thermocline Depth meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	156	uS/cm	
Total Dissolved Solids	241	mg/L	Moderate concentration of dissolved salts
pH	8.1	S.U.	Water is slightly alkaline
Alkalinity	124	mg CaCO ₃ /L	Water is hard
Total Phosphorus	14	ug/L	Moderately phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	35	meso-oligotrophic
Based on Total Phosphorus	38	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.
- No remedial action recommended at this time.
- Repeat LakeCheck in Fall.

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- 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 _____

Mrs. Jaimee Conroy, Technical Services Manager

FROM YOUR



DEALER



PLM Lake & Land Management Corp
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Caledonia MI 49316-
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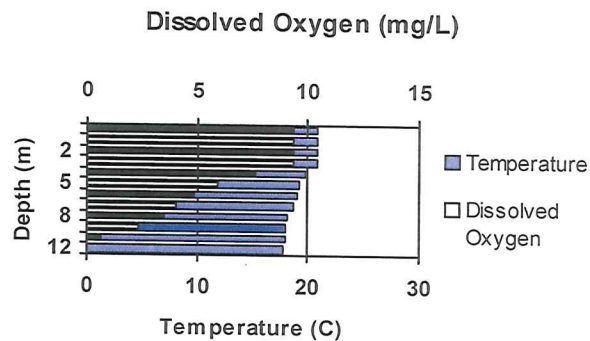
LAKE CHECK Water Quality Monitoring Report

2017409

Customer	Waterbody	Sample Information
Chippewa Lake	Chippewa Lake	Date: 9/20/2017
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	20.8	9.3	104
1	20.8	9.4	105
2	20.8	9.4	105
3	20.8	9.3	104
4	19.7	7.6	83
5	19.2	6.0	65
6	19.0	4.8	52
7	18.7	4.0	43
8	18.2	3.5	37
9	18.0	2.3	2
10	17.9	0.6	7
12	17.8	0.1	1



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	227	uS/cm	
Total Dissolved Solids	161	mg/L	Low concentration of dissolved salts
pH	8.7	S.U.	Water is slightly alkaline
Alkalinity	120	mg CaCO ₃ /L	Water is hard
Total Phosphorus	21	ug/L	Moderately phosphorus enriched
Nitrates	230	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	44	mesotrophic
Based on Chlorophyll	N/A	

Conclusions

- Conditions for fish growth are FAIR. (see cautions/warnings below)
- Minimum dissolved oxygen is nearly low enough to adversely affect sensitive fish.
- 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 _____

Mrs. Jaimee Conroy, Technical Services Manager

FROM YOUR  DEALER



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Bacteria Sampling Report

Waterbody:
Chippewa Lake

Chippewa Lake

Date Sampled:
7/20/2017

Location	<i>E. coli</i>	Total Coliforms	Interpretation
#1	4.0	270	● Water meets bacteriological standards for safe swimming.
#2	4.0	580	● Water meets bacteriological standards for safe swimming.
#3	96	760	● 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 _____ Date 22-Jul-17
Mrs. Jaimee Conroy, Technical Services Manager



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