

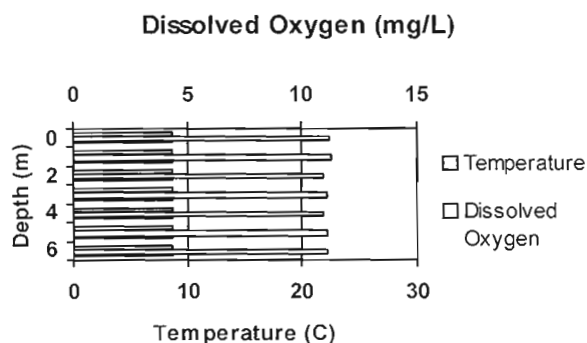
# LAKE CHECK Water Quality Monitoring Report

2019456

Customer	Waterbody	Sample Information
Missaukee Lake	Missaukee lake	Date: 4/30/2019 Site: site 1

## On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	8.6	11.2	96
1	8.6	11.3	97
2	8.6	10.9	94
3	8.6	11.1	95
4	8.6	10.9	94
5	8.6	11.1	95
6	8.6	11.1	95



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	133	uS/cm	Low concentration of dissolved salts
Total Dissolved Solids	126	mg/L	
pH	8.3	S.U.	Water is slightly alkaline
Alkalinity	185	mg CaCO <sub>3</sub> /L	Water is very hard
Total Phosphorus	7	ug/L	Slightly phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched
Chlorophyll	N/A	ug/L	

## Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	40	mesotrophic
Based on Total Phosphorus	28	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.
- Phosphorus and Nitrogen are within acceptable limits.
- 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 \_\_\_\_\_

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

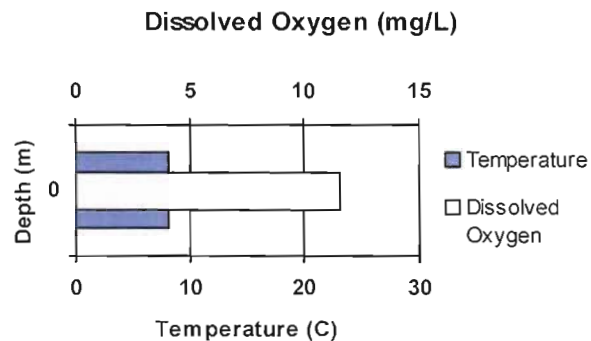
# LAKE CHECK Water Quality Monitoring Report

2019457

Customer	Waterbody	Sample Information
Missaukee Lake	Missaukee lake	Date: 4/30/2019
		Site: site #2

## On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	8.2	11.6	99



Secchi Disk Depth	meters
Thermocline Depth	meters

## Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	132	uS/cm	Low concentration of dissolved salts
Total Dissolved Solids	126	mg/L	
pH	8.4	S.U.	Water is slightly alkaline
Alkalinity	78	mg CaCO <sub>3</sub> /L	Water is soft
Total Phosphorus	7	ug/L	Slightly phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched
Chlorophyll	N/A	ug/L	

## Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	N/A	
Based on Total Phosphorus	28	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.
- Phosphorus and Nitrogen are within acceptable limits.
- 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 \_\_\_\_\_

Mrs. Jaimee Conroy, Technical Services Manager

FROM YOUR **WQ  
PRO** DEALER



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

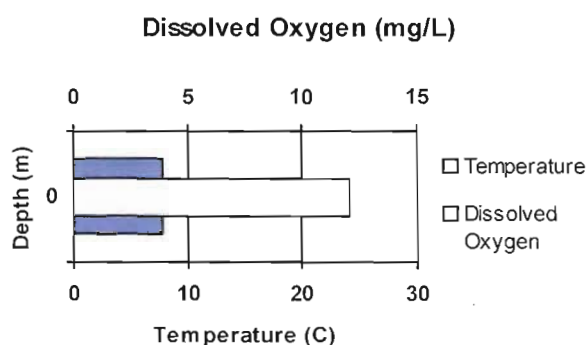
# LAKE CHECK Water Quality Monitoring Report

2019458

Customer	Waterbody	Sample Information
Missaukee Lake	Missaukee	Date: 4/30/2019 Site: site #3

## On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	7.8	12.1	104



Secchi Disk Depth	meters
Thermocline Depth	meters

## Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	130	uS/cm	
Total Dissolved Solids	126	mg/L	Low concentration of dissolved salts
pH	6.9	S.U.	Water is neutral (neither acid nor basic)
Alkalinity	97	mg CaCO <sub>3</sub> /L	Water is soft
Total Phosphorus	7	ug/L	Slightly phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched
Chlorophyll	N/A	ug/L	

## Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	N/A	
Based on Total Phosphorus	28	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.
- Phosphorus and Nitrogen are within acceptable limits.
- 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 \_\_\_\_\_

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



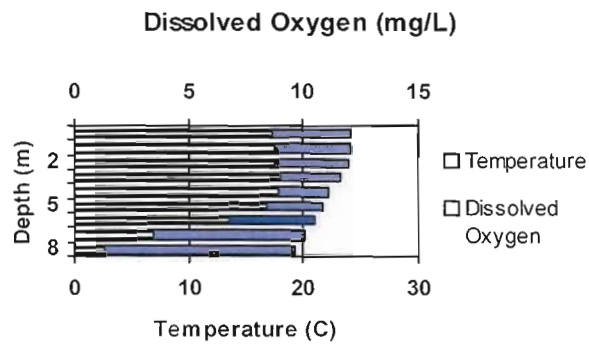
# LAKE CHECK Water Quality Monitoring Report

2019459

Customer	Waterbody	Sample Information
Missaukee Lake	Missaukee Lake	Date: 7/1/2019
		Site: site #1

## On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	24.1	8.6	103
1	24.1	8.8	104
2	24.0	8.7	104
3	23.3	9.0	105
4	22.2	8.9	102
5	21.7	8.4	95
6	21.0	6.8	76
7	20.0	3.5	38
8	19.3	1.3	15



Secchi Disk Depth 4.7 meters  
Thermocline Depth meters

## Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	183	uS/cm	
Total Dissolved Solids	120	mg/L	Low concentration of dissolved salts
pH	8.7	S.U.	Water is slightly alkaline
Alkalinity	96	mg CaCO <sub>3</sub> /L	Water is soft
Total Phosphorus	7	ug/L	Slightly phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched
Chlorophyll	N/A	ug/L	

## Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	38	meso-oligotrophic
Based on Total Phosphorus	28	oligotrophic
Based on Chlorophyll	N/A	

---

## Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is nearly low enough to adversely affect sensitive fish.
- pH is within acceptable limits.
- Phosphorus and Nitrogen are within acceptable limits.
- 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 \_\_\_\_\_

Mrs. Jaimee Conroy, Technical Services Manager



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



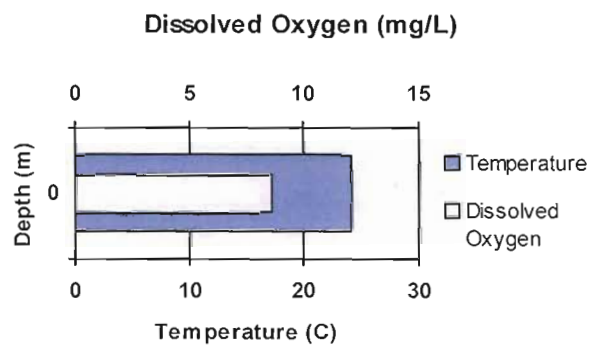
# LAKE CHECK Water Quality Monitoring Report

2019460

Customer	Waterbody	Sample Information
Missaukee Lake	Missaukee Lake	Date: 7/1/2019
		Site: site #2

## On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	24.1	8.6	102



Secchi Disk Depth 4.3 meters

Thermocline Depth meters

## Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	183	uS/cm	
Total Dissolved Solids	121	mg/L	Low concentration of dissolved salts
pH	8.7	S.U.	Water is slightly alkaline
Alkalinity	92	mg CaCO3/L	Water is soft
Total Phosphorus	7	ug/L	Slightly phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched
Chlorophyll	N/A	ug/L	

## Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	39	mesotrophic
Based on Total Phosphorus	28	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.
- Phosphorus and Nitrogen are within acceptable limits.
- 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 \_\_\_\_\_

Mrs. Jaimee Conroy, Technical Services Manager



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

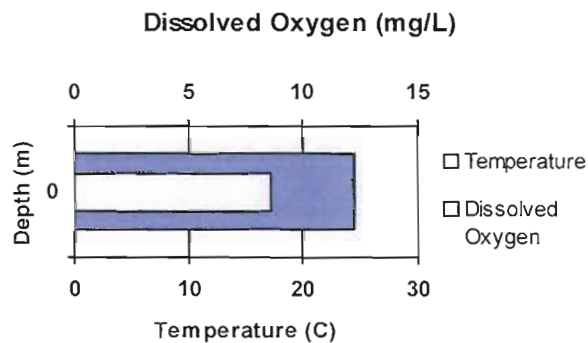
# LAKE CHECK Water Quality Monitoring Report

2019461

Customer	Waterbody	Sample Information
Missaukee Lake	Missaukee Lake	Date: 7/1/2019
		Site: site #3

## On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	24.5	8.6	103



Secchi Disk Depth	3.2 meters
Thermocline Depth	meters

## Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	188	uS/cm	Low concentration of dissolved salts
Total Dissolved Solids	123	mg/L	
pH	8.6	S.U.	Water is slightly alkaline
Alkalinity	93	mg CaCO <sub>3</sub> /L	Water is soft
Total Phosphorus	127	ug/L	Phosphorus polluted
Nitrates	230	ug/L	Not nitrogen enriched
Chlorophyll	N/A	ug/L	

## Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	43	mesotrophic
Based on Total Phosphorus	70	hypereutrophic
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.
- 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

water sample was found to be contaminated with sediment. Review/Monitor fall sample for return to adequate levels.

Report describes conditions at the time the sample was collected.

Approved by

*Jaimee Conroy*

Date \_\_\_\_\_

Mrs. Jaimee Conroy, Technical Services Manager



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

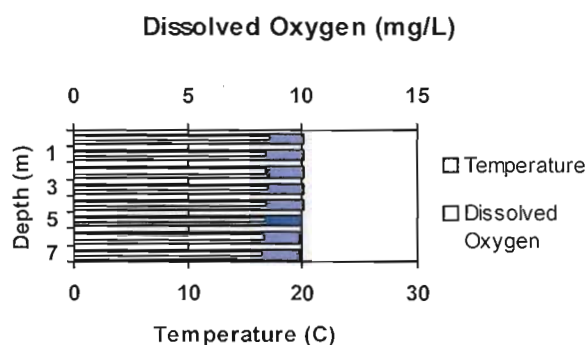
# LAKE CHECK Water Quality Monitoring Report

2019462

Customer	Waterbody	Sample Information
Missaukee Lake	Missaukee Lake	Date: 8/29/2019
		Site: Site#1

## On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	20.1	8.6	95
1	20.1	8.4	93
2	20.1	8.4	93
3	20.0	8.5	93
4	20.0	8.4	93
5	19.9	8.4	92
6	19.8	8.3	91
7	19.8	8.3	90



Secchi Disk Depth 4.2 meters

Thermocline Depth meters

## Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	169	uS/cm	
Total Dissolved Solids	121	mg/L	Low concentration of dissolved salts
pH	8.4	S.U.	Water is slightly alkaline
Alkalinity	85	mg CaCO <sub>3</sub> /L	Water is soft
Total Phosphorus	10	ug/L	Slightly phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched
Chlorophyll	N/A	ug/L	

## Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	39	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.
- Phosphorus and Nitrogen are within acceptable limits.
- 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



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



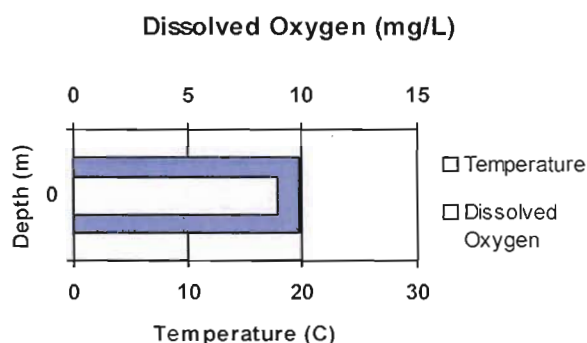
# LAKE CHECK Water Quality Monitoring Report

2019463

Customer	Waterbody	Sample Information
Missaukee Lake	Missaukee	Date: 8/29/2019 Site: site 2

## On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	19.8	8.9	99



Secchi Disk Depth	2.7 meters
Thermocline Depth	meters

## Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	167	uS/cm	
Total Dissolved Solids	120	mg/L	Low concentration of dissolved salts
pH	8.6	S.U.	Water is slightly alkaline
Alkalinity	89	mg CaCO <sub>3</sub> /L	Water is soft
Total Phosphorus	13	ug/L	Moderately phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched
Chlorophyll	N/A	ug/L	

## Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	46	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 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



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

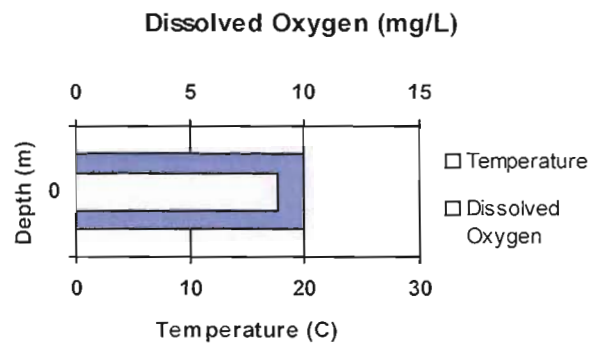
# LAKE CHECK Water Quality Monitoring Report

2019464

Customer	Waterbody	Sample Information
Missaukee Lake	Missaukee Lake	Date: 8/29/2019
		Site: site #3

## On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	19.9	8.8	97



Secchi Disk Depth	2.7 meters
Thermocline Depth	meters

## Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	168	uS/cm	
Total Dissolved Solids	121	mg/L	Low concentration of dissolved salts
pH	8.5	S.U.	Water is slightly alkaline
Alkalinity	89	mg CaCO3/L	Water is soft
Total Phosphorus	12	ug/L	Moderately phosphorus enriched
Nitrates	230	ug/L	Not nitrogen enriched
Chlorophyll	N/A	ug/L	

## Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	46	mesotrophic
Based on Total Phosphorus	36	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 \_\_\_\_\_

Mrs. Jaimee Conroy, Technical Services Manager



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