

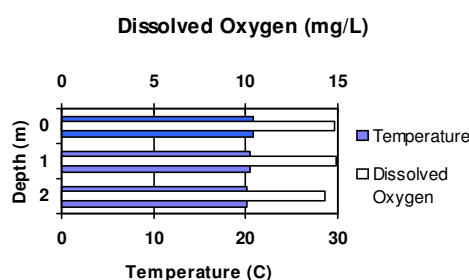
LAKE CHECK Water Quality Monitoring Report

2025180

Customer	Waterbody	Sample Information
Thornapple River Cascade	Thornapple River Cascade	Date: 9/16/2025
		Site: #1

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen mg/L	%
0	20.8	14.8	166
1	20.4	14.9	165
2	20.2	14.3	158



Secchi Disk Depth	1.3 meters
Thermocline Depth	meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	539	uS/cm	
Total Dissolved Solids	381	mg/L	Moderate concentration of dissolved salts
pH	8.4	S.U.	Water is slightly alkaline
Alkalinity	316	mg CaCO3/L	Water is extremely hard
Total Phosphorus	15	ug/L	Moderately phosphorus enriched
Nitrates	1030	ug/L	Moderately nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	57	eutrophic
Based on Total Phosphorus	39	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 nutrient (N and P) enriched. Adopt appropriate lakeshore landscaping and lawn care practices.
- REPEAT LakeCheck NEXT YEAR!

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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 Desjardins

Date 10/16/2025

Mrs. Jaimee Desjardins, Technical Services Manager

FROM YOUR



DEALER



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

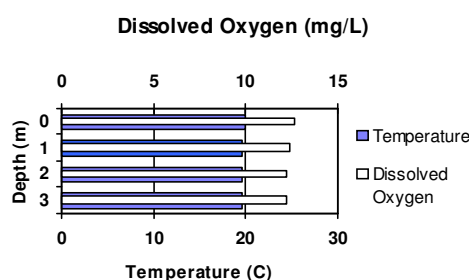
LAKE CHECK Water Quality Monitoring Report

2025181

Customer	Waterbody	Sample Information
Thornapple River Cascade	Thornapple River Cascade	Date: 9/16/2025
		Site: #2

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen mg/L	%
0	19.9	12.6	139
1	19.6	12.4	135
2	19.5	12.3	126
3	19.5	12.2	124



Secchi Disk Depth	1.3 meters
Thermocline Depth	meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	548	uS/cm	
Total Dissolved Solids	395	mg/L	Moderate concentration of dissolved salts
pH	8.5	S.U.	Water is slightly alkaline
Alkalinity	266	mg CaCO3/L	Water is extremely hard
Total Phosphorus	7	ug/L	Slightly phosphorus enriched
Nitrates	1070	ug/L	Moderately nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	57	eutrophic
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.
- Sample is nitrogen enriched. Consider nutrient abatement measures.
- 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 Desjardins

Date 10/16/2025

Mrs. Jaimee Desjardins, Technical Services Manager

FROM YOUR



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Bacteria Sampling Report

Waterbody:

Thornapple River Cascade

Thornapple Cascade

Date Sampled:

8/14/2025

Location	<i>E. coli</i>	Total Coliforms	Interpretation
#1	36.0		● Water meets bacteriological standards for safe swimming.
#2	68.0		● Water meets bacteriological standards for safe swimming.
#3	64.0		● 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 _____ Date 25-Aug-25
Mrs. Jaimee Desjardins, Technical Services Manager



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