



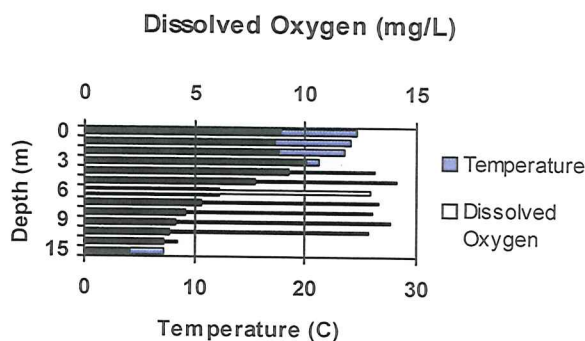
# Water Quality Monitoring Report

2017429

Customer	Waterbody	Sample Information
Harper Lake	Harper Lake	Date: 6/14/2017
		Site: Deep Hole

## On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	24.5	8.9	107
1	24.1	8.6	104
2	23.6	8.8	104
3	21.2	10.0	113
4	18.5	13.1	140
5	15.5	14.1	141
6	12.2	13.0	123
7	10.7	13.3	119
8	9.3	13.1	114
9	8.3	13.9	118
10	7.8	12.8	109
12	7.3	4.2	38
15	7.1	2.1	20



Secchi Disk Depth 5.0 meters

Thermocline Depth meters

## Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	232	uS/cm	
Total Dissolved Solids	152	mg/L	Low concentration of dissolved salts
pH	8.5	S.U.	Water is slightly alkaline
Alkalinity	134	mg CaCO3/L	Water is hard
Total Phosphorus	15	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	37	meso-oligotrophic
Based on Total Phosphorus	39	mesotrophic
Based on Chlorophyll	N/A	

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## Conclusions

- Conditions are good for fish growth.
- 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 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 **WO  
PRO** DEALER



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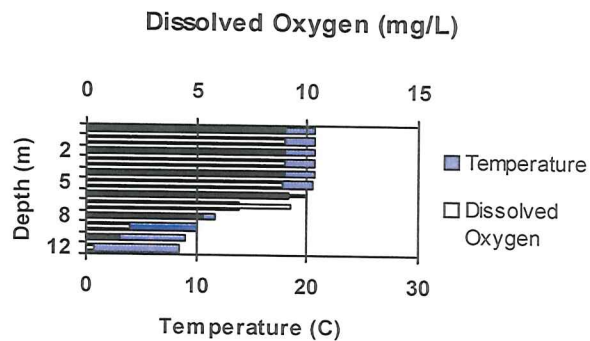
# Water Quality Monitoring Report

2017430

Customer	Waterbody	Sample Information
Harper Lake	Harper Lake	Date: 9/5/2017
		Site: Deep Hole

## On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	20.6	8.9	100
1	20.6	9.0	100
2	20.6	9.0	100
3	20.6	9.0	100
4	20.6	9.0	100
5	20.4	8.9	98
6	18.3	9.9	106
7	13.9	9.3	90
8	11.6	5.3	48
9	10.1	2.0	19
10	9.0	1.5	13
12	8.4	0.3	3



Secchi Disk Depth 5.3 meters

Thermocline Depth meters

## Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	212	uS/cm	
Total Dissolved Solids	151	mg/L	Low concentration of dissolved salts
pH	8.5	S.U.	Water is slightly alkaline
Alkalinity	135	mg CaCO3/L	Water is hard
Total Phosphorus	22	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	36	meso-oligotrophic
Based on Total Phosphorus	44	mesotrophic
Based on Chlorophyll	N/A	

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## 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.
- Deep water sample indicates possible internal loading of nutrients.
- 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 Conroy*

Date \_\_\_\_\_

Mrs. Jaimee Conroy, Technical Services Manager

FROM YOUR  DEALER



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# Bacteria Sampling Report

Waterbody: Harper Lake  
Harper Lake

Date Sampled:  
7/25/2017

Location	<i>E. coli</i>	Total Coliforms	Interpretation
#1	4.0	4.0	● Water meets bacteriological standards for safe swimming.
#2	4.0	4.0	● Water meets bacteriological standards for safe swimming.
#3	4.0	20	● 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 27-Jul-17  
Mrs. Jaimee Conroy, Technical Services Manager



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