

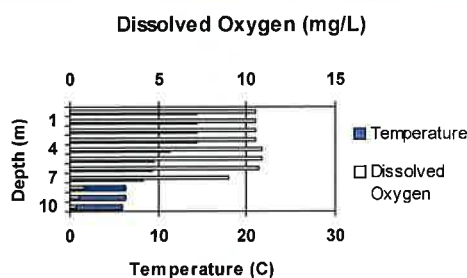
LAKE CHECK Water Quality Monitoring Report

202028

Customer	Waterbody	Sample Information
Woodbeck Chain of Lakes	Banks	Date: 5/5/2020
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	14.3	10.5	103
1	14.3	10.5	103
2	14.3	10.5	103
3	14.3	10.5	102
4	11.3	10.9	99
5	9.6	10.9	96
6	9.3	10.7	94
7	8.3	9.0	76
8	6.2	0.8	7
9	6.2	0.5	4
10	6.0	0.4	3



Secchi Disk Depth 4.3 meters

Thermocline Depth 3.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	299	uS/cm	
Total Dissolved Solids	244	mg/L	Moderate concentration of dissolved salts
pH	8.3	S.U.	Water is slightly alkaline
Alkalinity	137	mg CaCO ₃ /L	Water is hard
Total Phosphorus	8	ug/L	Slightly phosphorus enriched
Nitrates	200	ug/L	Not nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	39	mesotrophic
Based on Total Phosphorus	30	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 Desjardins Date 11/30/2020
Mrs. Jaimee Desjardins, Technical Services Manager

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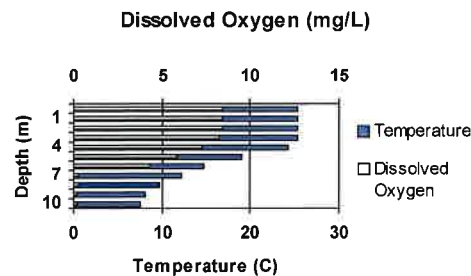
LAKE CHECK Water Quality Monitoring Report

202029

Customer	Waterbody	Sample Information
Woodbeck Chain of Lakes	Banks	Date: 8/26/2020
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	25.3	8.4	102
1	25.4	8.4	103
2	25.4	8.4	103
3	25.4	8.2	100
4	24.3	7.3	87
5	19.1	5.9	63
6	14.8	4.3	42
7	12.2	0.3	3
8	9.7	0.2	2
9	8.1	0.2	2
10	7.6	0.2	1



Secchi Disk Depth 3.5 meters

Thermocline Depth 3.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	252	uS/cm	
Total Dissolved Solids	392	mg/L	Moderate concentration of dissolved salts
pH	8.4	S.U.	Water is slightly alkaline
Alkalinity	159	mg CaCO ₃ /L	Water is hard
Total Phosphorus	28	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	42	mesotrophic
Based on Total Phosphorus	48	mesotrophic
Based on Chlorophyll	N/A	

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is nearly low enough to adversely affect sensitive fish.
- Bottom water is deoxygenated, preventing fish from living in cooler water at bottom of lake.
- 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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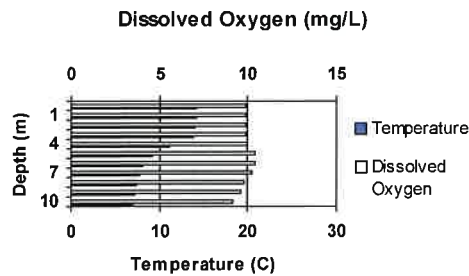
LAKE CHECK Water Quality Monitoring Report

202048

Customer	Waterbody	Sample Information
Woodbeck Chain of Lakes	Halfmile Lake	Date: 5/5/2020
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	14.2	9.9	97
1	14.2	9.9	97
2	14.1	9.9	97
3	13.9	9.9	95
4	11.1	10.0	91
5	9.1	10.5	91
6	8.0	10.4	91
7	7.8	10.2	86
8	7.4	9.8	82
9	7.2	9.6	79
10	7.0	9.1	75



Secchi Disk Depth 3.7 meters
 Thermocline Depth 3.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	278	uS/cm	
Total Dissolved Solids	227	mg/L	Moderate concentration of dissolved salts
pH	8.2	S.U.	Water is slightly alkaline
Alkalinity	144	mg CaCO ₃ /L	Water is hard
Total Phosphorus	8	ug/L	Slightly phosphorus enriched
Nitrates	657	ug/L	Moderately nitrogen enriched
Chlorophyll		N/A	

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	41	mesotrophic
Based on Total Phosphorus	30	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 in Fall.

-
- WARNING. condition requires immediate attention.
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 - OK. condition within acceptable limits.
 - NEUTRAL. condition neither good nor bad.

Notes

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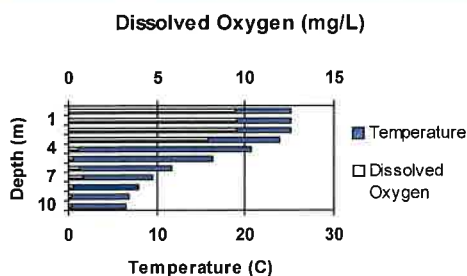
LAKE CHECK Water Quality Monitoring Report

202051

Customer	Waterbody	Sample Information
Woodbeck Chain of Lakes	Halfmile Lake	Date: 8/26/2020
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	25.1	9.5	115
1	25.1	9.5	115
2	25.1	9.5	115
3	23.9	7.9	94
4	20.6	0.5	6
5	16.4	0.2	2
6	11.7	0.6	5
7	9.6	0.8	7
8	7.9	0.3	3
9	6.8	0.2	2
10	6.4	0.2	1



Secchi Disk Depth 2.5 meters

Thermocline Depth 2.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	392	uS/cm	
Total Dissolved Solids	253	mg/L	Moderate concentration of dissolved salts
pH	8.8	S.U.	Water is slightly alkaline
Alkalinity	163	mg CaCO ₃ /L	Water is hard
Total Phosphorus	23	ug/L	Moderately phosphorus enriched
Nitrates	600	ug/L	Moderately nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	47	mesotrophic
Based on Total Phosphorus	45	mesotrophic
Based on Chlorophyll	N/A	

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is nearly low enough to adversely affect sensitive fish.
- Bottom water is deoxygenated, preventing fish from living in cooler water at bottom of lake.
- pH is within acceptable limits.
- Sample is somewhat phosphorus enriched. Create natural buffer between lawn & lakeshore.
- Sample is nitrogen enriched. Consider nutrient abatement measures.
- Deep water sample indicates possible internal loading of nutrients.
- REPEAT LakeCheck NEXT YEAR!

-
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Notes

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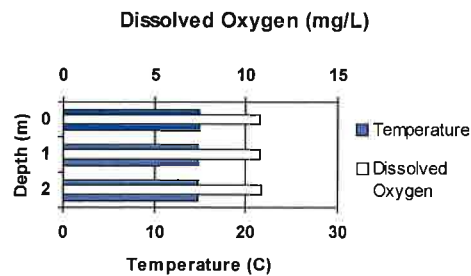
LAKE CHECK Water Quality Monitoring Report

202049

Customer	Waterbody	Sample Information
Woodbeck Chain of Lakes	Horseshoe Lake	Date: 5/5/2020
		Site: Middle

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	14.9	10.8	106
1	14.8	10.8	106
2	14.7	10.9	107



Secchi Disk Depth	meters
Thermocline Depth	meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	220	uS/cm	Low concentration of dissolved salts
Total Dissolved Solids	178	mg/L	
pH	8.3	S.U.	Water is slightly alkaline
Alkalinity	101	mg CaCO ₃ /L	Water is soft
Total Phosphorus	8	ug/L	Slightly phosphorus enriched
Nitrates	200	ug/L	Not nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	N/A	
Based on Total Phosphorus	30	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

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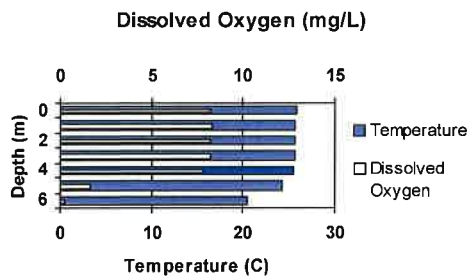
LAKE CHECK Water Quality Monitoring Report

202052

Customer	Waterbody	Sample Information
Woodbeck Chain of Lakes	Horseshoe	Date: 8/26/2020
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	25.9	8.2	101
1	25.7	8.3	102
2	25.6	8.2	101
3	25.6	8.2	101
4	25.5	7.8	95
5	24.3	1.6	19
6	20.4	0.3	3



Secchi Disk Depth 3.0 meters

Thermocline Depth 4.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	290	uS/cm	
Total Dissolved Solids	185	mg/L	Low concentration of dissolved salts
pH	8.5	S.U.	Water is slightly alkaline
Alkalinity	106	mg CaCO ₃ /L	Water is soft
Total Phosphorus	40	ug/L	Phosphorus enriched
Nitrates	200	ug/L	Not nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	44	mesotrophic
Based on Total Phosphorus	53	moderately eutrophic
Based on Chlorophyll	N/A	

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is nearly low enough to adversely affect sensitive fish.
- Bottom water is deoxygenated, preventing fish from living in cooler water at bottom of lake.
- 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!

-
- WARNING. condition requires immediate attention.
 - CAUTION. condition requires further evaluation.
 - OK. condition within acceptable limits.
 - NEUTRAL. condition neither good nor bad.

Notes

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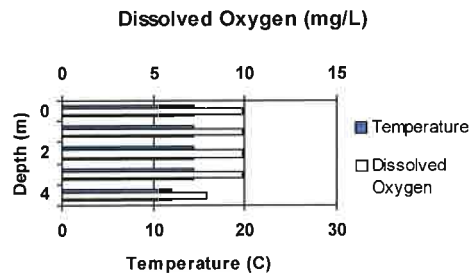
LAKE CHECK Water Quality Monitoring Report

2020108

Customer	Waterbody	Sample Information
Woodbeck Chain of Lakes	Thomas Lake	Date: 5/5/2020
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	14.4	9.9	97
1	14.4	9.9	97
2	14.4	9.9	97
3	14.4	9.9	97
4	11.9	7.9	76



Secchi Disk Depth 2.1 meters

Thermocline Depth 3.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	298	uS/cm	Moderate concentration of dissolved salts
Total Dissolved Solids	243	mg/L	
pH	8.3	S.U.	Water is slightly alkaline
Alkalinity	145	mg CaCO ₃ /L	Water is hard
Total Phosphorus	10	ug/L	Slightly phosphorus enriched
Nitrates	200	ug/L	Not nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	49	moderately eutrophic
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.
- Phosphorus and Nitrogen are within acceptable limits.

-
- WARNING. condition requires immediate attention.
 - CAUTION. condition requires further evaluation.
 - OK. condition within acceptable limits.
 - NEUTRAL. condition neither good nor bad.

Notes

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Approved by

Jaimee Desjardins

Date 11/30/2020

Mrs. Jaimee Desjardins, Technical Services Manager

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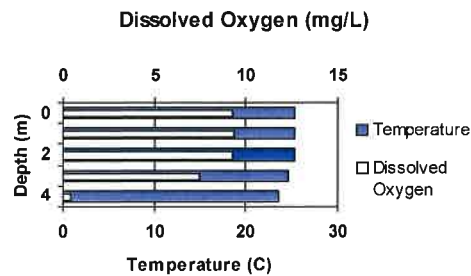
LAKE CHECK Water Quality Monitoring Report

2020110

Customer	Waterbody	Sample Information
Woodbeck Chain of Lakes	Thomas Lake	Date: 8/26/2020
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	25.3	9.3	113
1	25.3	9.3	114
2	25.3	9.3	114
3	24.6	7.4	89
4	23.6	0.4	5



Secchi Disk Depth 2.0 meters

Thermocline Depth 3.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	374	uS/cm	
Total Dissolved Solids	242	mg/L	Moderate concentration of dissolved salts
pH	8.7	S.U.	Water is slightly alkaline
Alkalinity	151	mg CaCO ₃ /L	Water is hard
Total Phosphorus	26	ug/L	Moderately phosphorus enriched
Nitrates	270	ug/L	Slightly nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	50	moderately eutrophic
Based on Total Phosphorus	47	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

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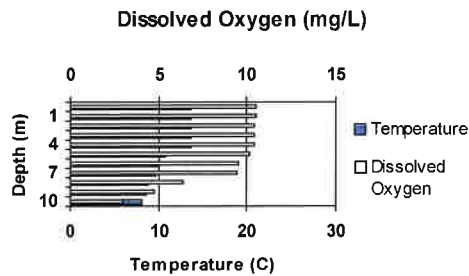
Water Quality Monitoring Report

2020118

Customer	Waterbody	Sample Information
Woodbeck Chain of Lakes	Woodbeck Lake	Date: 5/5/2020
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	13.7	10.5	101
1	13.7	10.5	101
2	13.7	10.5	101
3	13.6	10.5	101
4	13.6	10.5	101
5	10.8	10.2	92
6	10.0	9.5	86
7	9.7	9.4	83
8	8.8	6.4	55
9	8.6	4.8	41
10	8.0	3.0	25



Secchi Disk Depth 3.0 meters
 Thermocline Depth 4.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	221	uS/cm	
Total Dissolved Solids	183	mg/L	Low concentration of dissolved salts
pH	8.2	S.U.	Water is slightly alkaline
Alkalinity	112	mg CaCO ₃ /L	Water is soft
Total Phosphorus	11	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	44	mesotrophic
Based on Total Phosphorus	34	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

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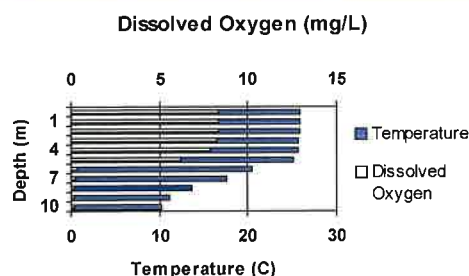
LAKE CHECK Water Quality Monitoring Report

2020121

Customer	Waterbody	Sample Information
Woodbeck Chain of Lakes	Woodbeck Lake	Date: 8/26/2020
		Site: Deep Hole

On-Site Results

Depth (m)	Temperature (degrees C)	Dissolved Oxygen	
		mg/L	%
0	25.8	8.4	103
1	25.8	8.4	103
2	25.8	8.3	102
3	25.7	8.3	102
4	25.7	7.9	97
5	25.2	6.2	75
6	20.5	0.3	4
7	17.6	0.2	3
8	13.7	0.2	2
9	11.2	0.2	2
10	10.3	0.1	1



Secchi Disk Depth 3.5 meters
Thermocline Depth 5.5 meters

Analytical Results

Parameter	Result	Units	Interpretation
Fecal Bacteria (E. coli)		CFU/100 mL	N/A
Conductivity	284	uS/cm	
Total Dissolved Solids	182	mg/L	Low concentration of dissolved salts
pH	8.5	S.U.	Water is slightly alkaline
Alkalinity	114	mg CaCO ₃ /L	Water is soft
Total Phosphorus	44	ug/L	Phosphorus enriched
Nitrates	200	ug/L	Not nitrogen enriched
Chlorophyll	N/A		

Trophic State Evaluation

	TSI	Trophic Status
Based on Secchi Disk Depth	42	mesotrophic
Based on Total Phosphorus	54	moderately eutrophic
Based on Chlorophyll	N/A	

Conclusions

- Conditions are good for fish growth.
- Minimum dissolved oxygen is nearly low enough to adversely affect sensitive fish.
- Bottom water is deoxygenated, preventing fish from living in cooler water at bottom of lake.
- pH is within acceptable limits.
- Deep water sample indicates possible internal loading of nutrients.
- REPEAT LakeCheck NEXT YEAR!

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