Rural Municipality of Macdonald
Annual Water System Operation Report – 2025

1.0 Introduction

The Municipality of Macdonald strives to provide high quality drinking water in sufficient quantity to meet public demand. It is the goal of the Municipality to do so in a safe, cost effective manner while remaining in compliance with the regulatory requirements governing the provision of drinking water.

It is the Municipality's belief that the public has a right to easily access information related to the drinking water they consume and the system through which it is provided. To that end the Municipality of Macdonald has prepared the following report.

2.0 Water Basics

2.1 Source

The Water Treatment Facility (WTF) located in Sanford, MB is supplied raw (untreated) water by the nearby La Salle River. Not only does this river have a reputation of being a reliable water source for the people in this agriculturally based region, water quality tests have shown that, with treatment, this is the most suitable source water for high quality drinking water.

The raw water is drawn by gravity from the high side of the La Salle River dam in Sanford to a pumping station at the WTF. From there it is then pumped to the facility's 500 000 m^3 retention ponds.

Throughout 2025, the raw water retention ponds were replenished almost continuously, with two significant periods where they were not being filled.

3.0 Treatment

3.1 Purpose

The water is treated to ensure a safe and pleasing drinking water supply to the homes and businesses throughout the Municipality. The Municipality is committed to meeting or exceeding the continuously improving water quality standards set by the Province at every opportunity available.

3.2 Classification & Certification

Operator certification and Facility classification fall under the Environmental Act's Water and Wastewater Facility Operators Program. The RM of Macdonald's Water Facility and Staff certification are as follows:

	Treatment Facility	
	Water Treatment	Class 4
	Water Distribution	Class 2
	Operators	
Manager	Water Treatment	Class 4
	Water Distribution	Class 2
	Wastewater Treatment	Class 2
	Wastewater Collection	Class 2
Operator 1 *(Part Time)*	Water Treatment	Class 4
	Water Distribution	Class 2
	Wastewater Treatment	Class 2
	Wastewater Collection	Class 2
Operator 2	Water Treatment	Class 4
	Water Distribution	Class 2
	Wastewater Treatment	Class 2
	Wastewater Collection	Class 2
Operator 3	Water Treatment	Class 4
	Water Distribution	Class 2
	Wastewater Treatment	Class 2
	Wastewater Collection	Class 2
Operator 4	Water Treatment	Class 1
	Water Distribution	Class 1
	Wastewater Treatment	Operator in Training
	Wastewater Collection	Operator in Training

3.3 Main Process

Due to the high quality of the water in the La Salle River, the Municipality can keep the treatment process relatively simple.

Membrane filtration treatment is used to clarify the water and remove microbial contaminants, such as bacteria and organic materials that are naturally found in surface water.

The membrane filtration treatment consists of aeration as pre-treatment followed by primary treatment using Ultra Filtration and secondary treatment using Reverse Osmosis Filtration processes.

3.4 Disinfection

The final step in the treatment of safe water is the disinfection process. Water is disinfected to destroy or inactivate disease-causing organisms in water. Water must be disinfected before it leaves the water treatment facility to ensure the water is safe right to the consumer's tap.

The treated water is disinfected using a multi barrier approach. This includes membrane filtration by both Ultrafiltration and Reverse Osmosis Filtration. The membrane filtration is certified to 4 log removal to ensure it has no bacteria, viruses or other organisms. The water is then further disinfected by chlorination. An adequate amount of chlorine is added before the water enters the storage reservoir to ensure a continued inactivation of bacteria and viruses, and to provide a disinfectant residual in the distribution system.

4.0 Storage & Distribution

4.1 Storage

There is a reservoir underneath the WTF built to ensure that enough treated water is available to meet water demand throughout the Municipality. The reservoir is designed for continual movement, so that the water is always fresh and to store approximately ½ days' worth of water during peak season (June). There are six additional reservoirs located throughout the Municipality.

- Sanford storage capacity - 1912m^3
- Domain storage capacity – 150m^3
- La Salle storage capacity – 1265m^3 (formerly 565m^3)
- Oak Bluff storage capacity – 1322m^3 (formerly 670m^3)
- Starbuck storage capacity – 280m^3
- Brunkild storage capacity – 200m^3
- McGillivray storage capacity – 1100m^3

4.2 Distribution

The water distribution system is the network of underground pipes, which carries the treated water to the homes and businesses in the Municipality. A combination of approximately 600 km of high-density polyethylene and poly vinyl chloride (PVC) piping is looped in some areas to ensure that fresh water is continuously supplied throughout the Municipality.

Regular maintenance is carried out in the distribution system most notably with the fall season annual fire hydrant flush and mainline valve exercise program.

4.3 Consumption

The volume of water consumed within the Municipality increased in 2025 by 8.5% compared to 2024. This increase is attributed to population growth, and a dry end of the summer.

The Municipality works diligently to mitigate total water loss in the distribution system by locating possible leaks and repairing them in a timely manner. See Appendix A for a breakdown of annual water consumption by community.

5.0 Testing

Various water tests are taken on a routine basis to ensure that the water is safe and to monitor how well the treatment facility is performing. The water is tested at the treatment facility and in the distribution system at various locations

and times. All water test results associated with water safety are submitted to the provincial Office of Drinking Water for review and approval.

5.1 Bacterial Testing

The raw water, the treated water and the water in the distribution system is tested bi-weekly for the presence of total coliform and E.Coli bacteria. If these bacteria are present in the water it is an indication that disease-causing organisms may also be present.

For a breakdown of our Bacteriological test results see Appendix B.

5.2 Disinfectant Testing

The level of chlorine is tested in the treated water every day to ensure that the water leaving the water treatment facility has enough chlorine to ensure proper disinfection. The chlorine levels in the distribution system are tested twice weekly, as well as when water samples for bacterial testing are taken.

5.3 Turbidity Testing

Turbidity is a measurement of the clarity of water. Turbidity levels indicate how well the treatment system is working to remove particles and other contaminants that can cause the water to look cloudy and impair the disinfection processes. Turbidity is tested daily as the raw river water enters the treatment facility, after each process during treatment and as it leaves the treatment facility reservoir. It is also tested in the distribution system in conjunction with the bi-weekly bacteriological sampling.

5.4 Disinfection By-Product (THM & HAA) Testing

Disinfection by-products can form when naturally occurring organic matter reacts with chlorine in drinking water. The most common disinfection by-products are trihalomethanes (THMs) and haloacetic acids (HAAs).

The current Canadian guideline for THMs is 0.1mg/L, based on an annual average of four tests per year from a point in the distribution system where THMs are most likely to be highest – at the outskirts of the distribution system. The THM levels are tested at two separate locations throughout the distribution system on a quarterly basis every year, in accordance with THM standards.

The current Canadian guideline for HAAs is 80 µg/L, based on an annual average of four tests per year from a point in the distribution system where HAAs are most likely to be highest – at the midpoint of the distribution system. The HAA levels are tested at two separate locations throughout the distribution system on a quarterly basis every year, in accordance with HAA standards.

For a complete breakdown of disinfection by-product test results for 2025 refer to Appendix C.

5.5 Results

The following table summarizes all the treated water test results for 2025:

Testing Parameter	Standard	Standard met?
Bacterial[1] Total coliform E. Coli	**Less than 1 total coliform** bacteria per 100ml in all treated & distributed water **Less than 1 *E. coli*** bacteria per 100ml in all treated & distributed water	100% (52/52)
Chlorine (leaving main reservoir)[2]	Free chlorine residual of at least **0.5mg/L** in water entering distribution system after minimum 20 minute contact time	100% (Continuous)
Chlorine (in piping network)[3]	Free chlorine residual of at least **0.1mg/L** at all times at any point in the distribution system	100% (Continuous)
Turbidity	Less than or equal to **0.1 NTU**[4] in 99% of monthly measurements of each membrane filtration unit's effluent. Not to exceed 0.3 NTU for any measurement	99.97%[5]
Membrane Integrity	Minimum log removal value (**LRV**) of **3.00** for *Cryptosporidium* and *Giardia*	Yes
THM	Less than or equal to **0.1 mg/L** as locational running annual average of quarterly samples	Yes
HAA	Less than or equal to **80 ug/L** (0.08mg/L) as locational running annual average of quarterly samples	Yes
Lead	Less than or equal to **0.005 mg/L**	Yes (30/30)
Manganese	Less than or equal to **0.12 mg/L**	Yes
Total Microcystins	Less than or equal to **0.0015 mg/L**	Yes

1- Most Probable Number Test/ 100 units
2- Based on Sanford Treated Free Chlorine Results
3- Based on Brunkild, Domain, La Salle, Oak Bluff, Sanford & Starbuck Distribution Free Chlorine Results
4- Nephelometric Turbidity Units
5- Based on Average Monthly Compliance

Complete breakdowns of Bacteriological Tests and THM tests are provided in Appendices B & C respectively.

Copies of all tests can be requested from the Water Treatment Facility.

5.6 Results

The Municipality has been monitoring Trihalomethanes (THM) for the last ten years and has consistently met the Provincial and Federal guidelines since 2016. As the summary table above indicates, the treatment system met the standard for THM's in 2025. The THM standard of 0.1 mg/L is based on a running average of quarterly samples.

5.7 Lead Monitoring Program

The Municipality of Macdonald began the Residential Lead monitoring program in 2025. The Water Treatment Facility collected 30 samples from sites throughout the Municipality in 2025. None returned an elevated lead result higher than the acceptable standard.

6.0 Emergencies

6.1 Response Systems in Place

The treatment facility and distribution system are connected to an electronic surveillance and monitoring system that operates 24 hours a day, year-round. The monitoring system alerts operators to any changes in water treatment and distribution process that might affect the Municipality's water supply (from low priority to high priority alarms). An 'Operator On-Call' program is in place. Trained operators are available 24 hours a day, seven days a week, 365 days a year to respond to the alarms issued by the electronic monitoring system as they arise and correct the issue at hand.

A Municipal app is available to the public which allows for the posting of notices concerning water quality and or supply issues within the Municipality.

6.2 Emergencies, Regulatory Compliance Issues and Operational Issues

During 2025, the Municipality dealt with:

<u>Water Line Breaks:</u>

- Several breaks occurred throughout the system in 2025. Each was repaired quickly, with minimal service interruption to affected customers.

<u>Boil Water Advisory</u>

- Starbuck experienced a 36-hour Boil Water Advisory (BWA) after a generator failure led to low fuel levels and prevented the reservoir from returning to normal power. This caused a brief depressurization in the distribution system, requiring the issuance of the BWA. All affected customers were notified.
- A planned BWA was issued for two residences directly supplied by the Water Treatment Facility to allow for scheduled construction work at the facility. Impacted customers were informed in advance.

7.0 Expenses

As part of the Municipality's operating license, *The Drinking Water Safety Act* (C.C.S.M. c. D101) requires the submission of engineering assessments as per sections 9(1), 9(2) and 10 of said Act. The assessment assists in determining the integrity and longevity of present assets, risk assessment and the importance of budgeting for future replacements and projects. An accredited engineering firm, Associated Engineering, was hired to complete a thorough assessment of the Sanford treatment facility along with its satellite reservoirs. Upon completion the

assessment was submitted to both Manitoba Conservation and the Office of Drinking Water for approval. The Municipality has begun to prioritize and implement the required or suggested projects from the assessment.

7.1 Major Expenses Incurred

The major operational expenses that were incurred throughout 2025 are as follows:

- Expansion of the Water Treatment Facility in Sanford
- Replacement of a portion of Reverse Osmosis membranes
- Installation of facility access system at Water Treatment Facility
- Completion of McGillivray Blvd Water Reservoir

7.2 Future Expenses

With respect to future expenses, numerous budgeted projects including ones highlighted from the assessment have been researched, prioritized and will be implemented for the 2026 and 2027 years. Some of the future projects planned are:

- Expansion of the Water Treatment Facility in Sanford
- Replacement of aging residential water meters
- Upgrades to SCADA system components at all facilities

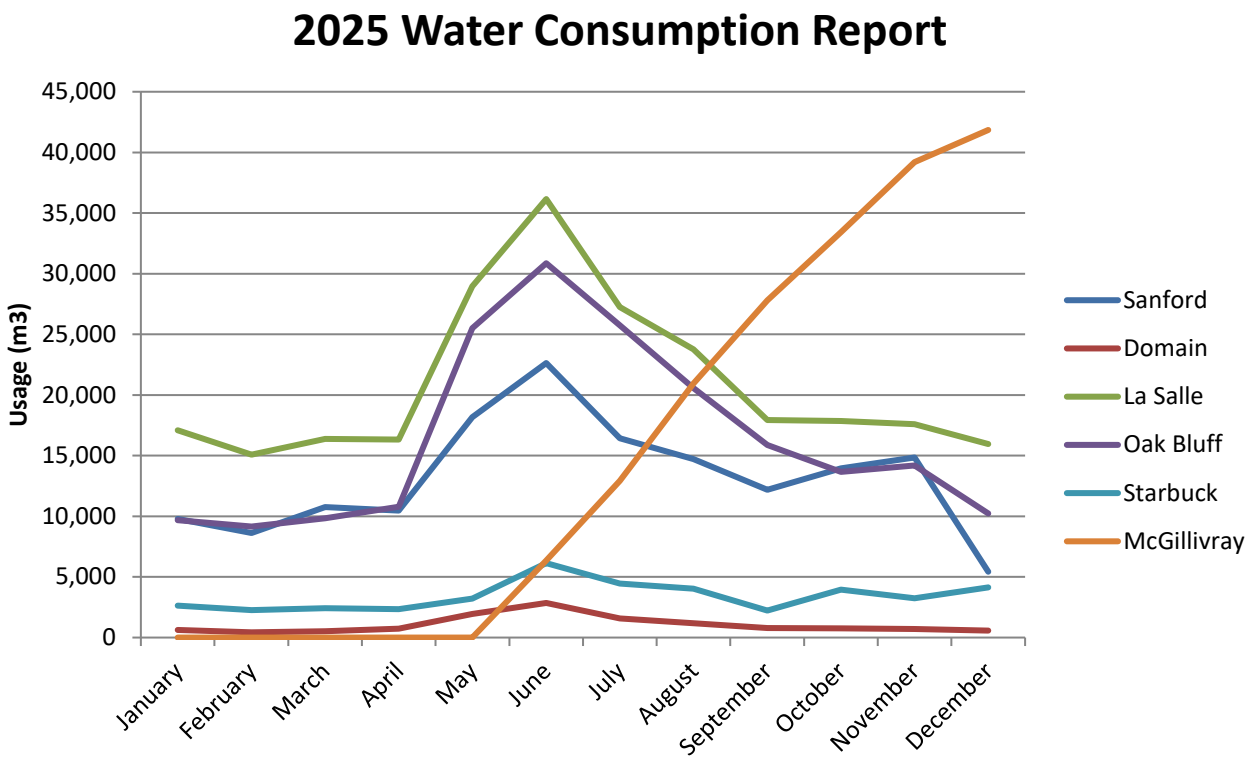
8.0 Contact Information

For general questions during regular business hours, call the Macdonald Municipal Office at 161 Mandan Drive Sanford, between the hours of 8:30 am - 4:00 pm at 204-736-2255 or send an email to: info@rmofmacdonald.com Information is also available on the Municipal website at www.rmofmacdonald.com

To report an issue with your water supply during regular business hours, call the Water Treatment Facility Operators at 204-736-4327 between 8:00 am – 4:30 pm. To report an emergency after hours, call forwarding is set to the cell number of the Operator on Call for all other emergencies. The Manager of Public Works is also available for water break emergencies at 204-736-2214.

Appendix A

2025 Water Consumption



Appendix B

Complete Breakdown of 2025 Bacteriological Tests

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

204-736-4327

Customer ID:
Date Received: 06/01/2025
Date Sampled: 06/01/2025
Test Date: 06/01/2025
Report Date: 07/01/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw	Total Coliforms	54	MPN/100 mls	UnAcceptable *
	E. coli	4	MPN/100 mls	UnAcceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	2.86	NTU	
Treated Res Out	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.55	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.074	NTU	
Dist - Sanford 7 Railway Ave	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.19	mg/L	
	** Total Chlorine	1.46	mg/L	
	** Turbidity	0.12	NTU	
Dist - Brunkild Hwy 3 Pth 332	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.61	mg/L	
	** Total Chlorine	0.83	mg/L	
	** Turbidity	0.10	NTU	
Dist - Domain 1 MacDonald Rd 6E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.47	mg/L	
	** Total Chlorine	0.72	mg/L	
	** Turbidity	0.10	NTU	
Dist - Res in @ 7036 Rd 52 N Starbuck	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.79	mg/L	
	** Total Chlorine	1.01	mg/L	
	** Turbidity	0.08	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.51	mg/L	
	** Total Chlorine	1.71	mg/L	
	** Turbidity	0.05	NTU	

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Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
DateSampled: 06/01/2025

Sample ID	Analysis	Results	Units	
Dist - LaSalle 49 Rue Principale Unit 5	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.34	mg/L	
	** Total Chlorine	1.65	mg/L	
	** Turbidity	0.10	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.00	mg/L	
	** Total Chlorine	1.22	mg/L	
	** Turbidity	0.06	NTU	
Dist - Oakbluff 34a PTH 3E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.97	mg/L	
	** Total Chlorine	1.23	mg/L	
	** Turbidity	0.12	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.58	mg/L	
	** Total Chlorine	1.86	mg/L	
	** Turbidity	0.08	NTU	
Dist - Starbuck 150 Railway St	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.29	mg/L	
	** Total Chlorine	1.52	mg/L	
	** Turbidity	0.09	NTU	

**Indicate field tests performed by customer.

The test results reported relate only to the samples identified in the "Sample ID" section of the Analysis Certificate as received by Horizon Lab.

*Maximum Acceptable Concentration (MAC) based on the GCDWQ (Guidelines for Canadian Drinking Water Quality) Summary Table (Total Coliform = 0 MPN/100ml / E.Coli = 0 MPN/100ml) https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html Test Method: Analysis of Total Coliforms and E. Coli by Enzyme Substrate Coliform Test, Standard Methods for the Examination of Water and Wastewater, section 9223B. Results are reported as Most Probable Number in 100ml (MPN/100ml). For more information on how to test a well, well disinfection, and how to reduce the risk of well water contamination, please see Manitoba's Water Well Fact Sheets online at www.manitoba.ca/drinkingwater.For general inquiries regarding private wells in Manitoba, please call the office of Drinking Water at 204-945-5762. For technical inquiries and guidance specifically related to private wells, call 204-948-1351.

Issued By:

Tamara Zary
Lab Supervisor

Horizon Lab Ltd.
4055 Portage Avenue Winnipeg, MB R3K 2E8
(204) 488-2035
customerservice@horizonlab.ca
www.horizonlab.ca

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

204-736-4327

Customer ID:
Date Received: 20/01/2025
Date Sampled: 20/01/2025
Test Date: 20/01/2025
Report Date: 21/01/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw	Total Coliforms	27	MPN/100 mls	UnAcceptable *
	E. coli	1	MPN/100 mls	UnAcceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	2.69	NTU	
Treated Res Out	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.48	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.08	NTU	
Dist - Sanford 41 157 Macdonald Rd	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.54	mg/L	
	** Total Chlorine	0.76	mg/L	
	** Turbidity	0.05	NTU	
Dist - Brunkild 4 006 PR305	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.27	mg/L	
	** Total Chlorine	0.46	mg/L	
	** Turbidity	0.05	NTU	
Dist - Domain 40 088 Rd 4E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.66	mg/L	
	** Total Chlorine	0.90	mg/L	
	** Turbidity	0.07	NTU	
Dist - Reservoir in @ Brunkild	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.79	mg/L	
	** Total Chlorine	096	mg/L	
	** Turbidity	0.07	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.26	mg/L	
	** Total Chlorine	1.51	mg/L	
	** Turbidity	0.08	NTU	

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Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Sampled: 20/01/2025

Sample ID	Analysis	Results	Units	
Dist - LaSalle 51 106 PR330	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.55	mg/L	
	** Total Chlorine	0.84	mg/L	
	** Turbidity	0.05	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH 3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.05	mg/L	
	** Total Chlorine	1.31	mg/L	
	** Turbidity	0.07	NTU	
Dist - Oakbluff 3700 McGillivray Blvd	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.66	mg/L	
	** Total Chlorine	0.89	mg/L	
	** Turbidity	0.09	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.45	mg/L	
	** Total Chlorine	1.67	mg/L	
	** Turbidity	0.08	NTU	
Dist - Starbuck 52 063 River Oak Dr	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.91	mg/L	
	** Total Chlorine	1.08	mg/L	
	** Turbidity	0.08	NTU	

**Indicate field tests performed by customer.

The test results reported relate only to the samples identified in the "Sample ID" section of the Analysis Certificate as received by Horizon Lab.

*Maximum Acceptable Concentration (MAC) based on the GCDWQ (Guidelines for Canadian Drinking Water Quality) Summary Table (Total Coliform = 0 MPN/100ml / E.Coli = 0 MPN/100ml) https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html Test Method: Analysis of Total Coliforms and E. Coli by Enzyme Substrate Coliform Test, Standard Methods for the Examination of Water and Wastewater, section 9223B. Results are reported as Most Probable Number in 100ml (MPN/100ml). For more information on how to test a well, well disinfection, and how to reduce the risk of well water contamination, please see Manitoba's Water Well Fact Sheets online at www.manitoba.ca/drinkingwater.For general inquiries regarding private wells in Manitoba, please call the office of Drinking Water at 204-945-5762. For technical inquiries and guidance specifically related to private wells, call 204-948-1351.

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HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

204-736-4327

Customer ID:
Date Received: 03/02/2025
Date Sampled: 03/02/2025
Test Date: 03/02/2025
Report Date: 04/02/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw - 1149 Hwy 3	Total Coliforms	20	MPN/100 mls	UnAcceptable *
	E. coli	1	MPN/100 mls	UnAcceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	2.90	NTU	
Treated Res Out - 1149 Hwy 3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.37	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.06	NTU	
Dist Sanford - 28 Mandan Dr	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.24	mg/L	
	** Total Chlorine	1.44	mg/L	
	** Turbidity	0.06	NTU	
Dist Brunkild - 10 First Street	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.10	mg/L	
	** Total Chlorine	1.42	mg/L	
	** Turbidity	0.08	NTU	
Dist Domain - 41107 6E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.06	mg/L	
	** Total Chlorine	1.22	mg/L	
	** Turbidity	0.10	NTU	
Dist Reservoir In @ Domain 41108 6E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.72	mg/L	
	** Total Chlorine	0.90	mg/L	
	** Turbidity	0.10	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.41	mg/L	
	** Total Chlorine	1.62	mg/L	
	** Turbidity	0.07	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Sampled:03/02/2025

Sample ID	Analysis	Results	Units	
Dist Lasalle - Lasalle Daycare Nathan Dr	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.24	mg/L	
	** Total Chlorine	0.42	mg/L	
	** Turbidity	0.12	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.25	mg/L	
	** Total Chlorine	1.51	mg/L	
	** Turbidity	0.09	NTU	
Dist Oakbluff 34A PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.20	mg/L	
	** Total Chlorine	1.48	mg/L	
	** Turbidity	0.08	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.25	mg/L	
	** Total Chlorine	1.46	mg/L	
	** Turbidity	0.09	NTU	
Dist Starbuck 21 Main Street	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.21	mg/L	
	** Total Chlorine	1.46	mg/L	
	** Turbidity	0.08	NTU	

**Indicate field tests performed by customer.

The test results reported relate only to the samples identified in the "Sample ID" section of the Analysis Certificate as received by Horizon Lab.

*Maximum Acceptable Concentration (MAC) based on the GCDWQ (Guidelines for Canadian Drinking Water Quality) Summary Table (Total Coliform = 0 MPN/100ml / E.Coli = 0 MPN/100ml) https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html Test Method: Analysis of Total Coliforms and E. Coli by Enzyme Substrate Coliform Test, Standard Methods for the Examination of Water and Wastewater, section 9223B. Results are reported as Most Probable Number in 100ml (MPN/100ml). For more information on how to test a well, well disinfection, and how to reduce the risk of well water contamination, please see Manitoba's Water Well Fact Sheets online at www.manitoba.ca/drinkingwater.For general inquiries regarding private wells in Manitoba, please call the office of Drinking Water at 204-945-5762. For technical inquiries and guidance specifically related to private wells, call 204-948-1351.

Issued By:

Tamara Zary

Lab Supervisor

Horizon Lab Ltd.
4055 Portage Avenue Winnipeg, MB R3K 2E8
(204) 488-2035
customerservice@horizonlab.ca
www.horizonlab.ca

Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	MACDONALD REGIONAL 1 - RAW 1149 HWY 3	MACDONALD REGIONAL 2 - TREATED RES OUT 1149 HWY 3	MACDONALD REGIONAL 3 - DISTRIBUTION SANFORD 42 PR 247 E	MACDONALD REGIONAL 3 - DISTRIBUTION BRUNKILD 7010 rD 38 nw	MACDONALD REGIONAL 3 - DISTRIBUTION DOMAIN 41152 MACDONALD RD 6E
Client sample ID									
Client sampling date / time					19-Feb-2025 08:35	19-Feb-2025 08:30	19-Feb-2025 09:15	19-Feb-2025 12:30	19-Feb-2025 13:20
					WP2502184-001	WP2502184-002	WP2502184-003	WP2502184-004	WP2502184-005
					Result	Result	Result	Result	Result
Field Tests									
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L	----	1.41	1.25	0.62	0.46
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L	----	----	1.38	0.85	0.62
Turbidity, field	----	EF001/WP	0.01	NTU	3.57	0.08	0.10	0.06	0.09
Microbiological Tests									
Coliforms, total	----	E010/WP	1	MPN/100 mL	9	<1	<1	<1	<1
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL	1	<1	<1	<1	<1

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	MACDONALD REGIONAL 3 - DISTRIBUTION RESERVOIR IN @ LA SALLE 92 PR 247E	MACDONALD REGIONAL 3 - DISTRIBUTION @ LA SALLE RESERVOIR OUT	MACDONALD REGIONAL 3 - DISTRIBUTION LA SALLE 51134 PR 330	MACDONALD REGIONAL 3 - DISTRIBUTION @OAK BLUFF RESERVOIR OUT	MACDONALD REGIONAL 3 - DISTRIBUTION @OAK BLUFF4900 McGILLVIRAY BLVD
Client sampling date / time					19-Feb-2025 13:36	19-Feb-2025 13:45	19-Feb-2025 14:05	19-Feb-2025 14:30	19-Feb-2025 15:01
					WP2502184-006	**WP2502184-007**	**WP2502184-008**	**WP2502184-009**	**WP2502184-010**
					Result	Result	Result	Result	Result
Field Tests									
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L	1.00	1.13	0.77	1.30	1.03
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L	1.32	1.48	1.05	1.57	1.35
Turbidity, field	----	EF001/WP	0.01	NTU	0.08	0.09	0.12	0.11	0.11
Microbiological Tests									
Coliforms, total	----	E010/WP	1	MPN/100 mL	<1	<1	<1	<1	<1
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL	<1	<1	<1	<1	<1

Please refer to the General Comments section for an explanation of any result qualifiers detected.

Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

					Client sample ID	MACDONALD REGIONAL 3 - DISTRIBUTION @ STARBUCK RESERVOIR OUT 7036 R. 54NE	MACDONALD REGIONAL 3 - DISTRIBUTION STARBUCK 8048 RD 52 NW	----	----	----
					Client sampling date / time	19-Feb-2025 09:50	19-Feb-2025 11:00	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		WP2502184-011	WP2502184-012	----	----	----
						Result	Result	----	----	----
Field Tests										
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L		1.38	0.95	----	----	----
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L		1.50	1.16	----	----	----
Turbidity, field	----	EF001/WP	0.01	NTU		0.09	0.10	----	----	----
Microbiological Tests										
Coliforms, total	----	E010/WP	1	MPN/100 mL		<1	<1	----	----	----
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL		<1	<1	----	----	----

Please refer to the General Comments section for an explanation of any result qualifiers detected.

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 03/03/2025
Date Sampled: 03/03/2025
Test Date: 03/03/2025
Report Date: 04/03/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw	Total Coliforms	11	MPN/100 mls	UnAcceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	3.04	NTU	
Treated	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.37	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.06	NTU	
Dist - Sanford 20A River Cres.	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.39	mg/L	
	** Total Chlorine	1.59	mg/L	
	** Turbidity	0.10	NTU	
Dist - Brunkild 30 Railway Ave	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.14	mg/L	
	** Total Chlorine	1.39	mg/L	
	** Turbidity	0.09	NTU	
Dist - Domain 39 039 Rd 5E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.38	mg/L	
	** Total Chlorine	0.62	mg/L	
	** Turbidity	0.05	NTU	
Dist Reservoir In @ Oak Bluff	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.04	mg/L	
	** Total Chlorine	1.15	mg/L	
	** Turbidity	0.05	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.42	mg/L	
	** Total Chlorine	1.63	mg/L	
	** Turbidity	0.06	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled:03/03/2025

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Sample ID	Analysis	Results	Units	
Dist - LaSalle 90 PR 247	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.34	mg/L	
	** Total Chlorine	1.57	mg/L	
	** Turbidity	0.07	NTU	
Dist @ Oak Bluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.63	mg/L	
	** Total Chlorine	1.81	mg/L	
	** Turbidity	0.09	NTU	
Dist - Oak Bluff 130 Agri Park Rd	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.98	mg/L	
	** Total Chlorine	1.12	mg/L	
	** Turbidity	0.05	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.49	mg/L	
	** Total Chlorine	1.69	mg/L	
	** Turbidity	0.09	NTU	
Dist - Starbuck 11 Main Street	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.23	mg/L	
	** Total Chlorine	1.49	mg/L	
	** Turbidity	0.08	NTU	

**Indicate field tests performed by customer.

The test results reported relate only to the samples identified in the "Sample ID" section of the Analysis Certificate as received by Horizon Lab.

*Maximum Acceptable Concentration (MAC) based on the GCDWQ (Guidelines for Canadian Drinking Water Quality) Summary Table (Total Coliform = 0 MPN/100ml / E.Coli = 0 MPN/100ml) https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html Test Method: Analysis of Total Coliforms and E. Coli by Enzyme Substrate Coliform Test, Standard Methods for the Examination of Water and Wastewater, section 9223B. Results are reported as Most Probable Number in 100ml (MPN/100ml). For more information on how to test a well, well disinfection, and how to reduce the risk of well water contamination, please see Manitoba's Water Well Fact Sheets online at www.manitoba.ca/drinkingwater.For general inquiries regarding private wells in Manitoba, please call the office of Drinking Water at 204-945-5762. For technical inquiries and guidance specifically related to private wells, call 204-948-1351.

Issued By:



Ken Kwiatkowski

Lab Director

Horizon Lab Ltd.
4055 Portage Avenue Winnipeg, MB R3K 2E8
(204) 488-2035
customerservice@horizonlab.ca
www.horizonlab.ca

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 17/03/2025
Date Sampled: 17/03/2025
Test Date: 17/03/2025
Report Date: 18/03/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw - 1149 Hwy 3	Total Coliforms	>2420	MPN/100 mls	UnAcceptable *
	E. coli	1	MPN/100 mls	UnAcceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	3.47	NTU	
Treated Res Out - 1149 Hwy	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.38	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.048	NTU	
Dist Sanford - 58 247E PR	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.26	mg/L	
	** Total Chlorine	1.38	mg/L	
	** Turbidity	0.06	NTU	
Dist Brunkild - 42024 Rd 8W	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.44	mg/L	
	** Total Chlorine	0.62	mg/L	
	** Turbidity	0.06	NTU	
Dist Domain - 7094 41 NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.93	mg/L	
	** Total Chlorine	1.01	mg/L	
	** Turbidity	0.07	NTU	
Dist Reservoir In @ Starbuck 7036 Rd 52 NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.17	mg/L	
	** Total Chlorine	1.25	mg/L	
	** Turbidity	0.07	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.34	mg/L	
	** Total Chlorine	1.39	mg/L	
	** Turbidity	0.04	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled: 17/03/2025

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Sample ID	Analysis	Results	Units	
Dist LaSalle - 51133 10E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.23	mg/L	
	** Total Chlorine	0.34	mg/L	
	** Turbidity	0.06	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.47	mg/L	
	** Total Chlorine	1.63	mg/L	
	** Turbidity	0.09	NTU	
Dist Oakbluff - 54 South Landing	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.34	mg/L	
	** Total Chlorine	1.50	mg/L	
	** Turbidity	0.07	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.69	mg/L	
	** Total Chlorine	1.71	mg/L	
	** Turbidity	0.08	NTU	
Dist - Starbuck 53153 PR 332	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.13	mg/L	
	** Total Chlorine	1.26	mg/L	
	** Turbidity	0.09	NTU	

**Indicate field tests performed by customer.

The test results reported relate only to the samples identified in the "Sample ID" section of the Analysis Certificate as received by Horizon Lab.

*Maximum Acceptable Concentration (MAC) based on the GCDWQ (Guidelines for Canadian Drinking Water Quality) Summary Table (Total Coliform = 0 MPN/100ml / E.Coli = 0 MPN/100ml) https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html Test Method: Analysis of Total Coliforms and E. Coli by Enzyme Substrate Coliform Test, Standard Methods for the Examination of Water and Wastewater, section 9223B. Results are reported as Most Probable Number in 100ml (MPN/100ml). For more information on how to test a well, well disinfection, and how to reduce the risk of well water contamination, please see Manitoba's Water Well Fact Sheets online at www.manitoba.ca/drinkingwater.For general inquiries regarding private wells in Manitoba, please call the office of Drinking Water at 204-945-5762. For technical inquiries and guidance specifically related to private wells, call 204-948-1351.

Issued By:

Tamara Zary

Lab Supervisor

Horizon Lab Ltd.
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(204) 488-2035
customerservice@horizonlab.ca
www.horizonlab.ca

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 31/03/2025
Date Sampled: 31/03/2025
Test Date: 31/03/2025
Report Date: 01/04/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw	Total Coliforms	5	MPN/100 mls	UnAcceptable *
	E. coli	2	MPN/100 mls	UnAcceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	4.12	NTU	
Treated Res Out	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.30	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.032	NTU	
Dist Sanford - 188 Mandam Dr - Fire Hall	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.30	mg/L	
	** Total Chlorine	1.46	mg/L	
	** Turbidity	0.04	NTU	
Dist Brunkild - Hwy 3 PTH 332 - Esso	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.09	mg/L	
	** Total Chlorine	1.21	mg/L	
	** Turbidity	0.07	NTU	
Dist Domain - 41116 MacDonald Rd 6E - IT Office	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.36	mg/L	
	** Total Chlorine	1.49	mg/L	
	** Turbidity	0.10	NTU	
Dist Reservoir In @ 6 PR 332 Brunkild	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.06	mg/L	
	** Total Chlorine	1.10	mg/L	
	** Turbidity	0.05	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.20	mg/L	
	** Total Chlorine	1.36	mg/L	
	** Turbidity	0.08	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled:31/03/2025

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Sample ID	Analysis	Results	Units	
Dist Lasalle - 49 Rue Principal - Chicken Chef	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.16	mg/L	
	** Total Chlorine	1.37	mg/L	
	** Turbidity	0.08	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.21	mg/L	
	** Total Chlorine	1.29	mg/L	
	** Turbidity	0.04	NTU	
Dist Oakbluff - 44 PTH 3E - Lasalle Insurance	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.20	mg/L	
	** Total Chlorine	1.29	mg/L	
	** Turbidity	0.04	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.37	mg/L	
	** Total Chlorine	1.42	mg/L	
	** Turbidity	0.06	NTU	
Dist Starbuck - 21 Main St - Access Credit Union	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.28	mg/L	
	** Total Chlorine	1.40	mg/L	
	** Turbidity	0.06	NTU	

**Indicate field tests performed by customer.

The test results reported relate only to the samples identified in the "Sample ID" section of the Analysis Certificate as received by Horizon Lab.

*Maximum Acceptable Concentration (MAC) based on the GCDWQ (Guidelines for Canadian Drinking Water Quality) Summary Table (Total Coliform = 0 MPN/100ml / E.Coli = 0 MPN/100ml) https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html Test Method: Analysis of Total Coliforms and E. Coli by Enzyme Substrate Coliform Test, Standard Methods for the Examination of Water and Wastewater, section 9223B. Results are reported as Most Probable Number in 100ml (MPN/100ml). For more information on how to test a well, well disinfection, and how to reduce the risk of well water contamination, please see Manitoba's Water Well Fact Sheets online at www.manitoba.ca/drinkingwater.For general inquiries regarding private wells in Manitoba, please call the office of Drinking Water at 204-945-5762. For technical inquiries and guidance specifically related to private wells, call 204-948-1351.

Issued By:

Ken Kwiatkowski

Lab Director

Horizon Lab Ltd.
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(204) 488-2035
customerservice@horizonlab.ca
www.horizonlab.ca

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 16/04/2025
Date Sampled: 16/04/2025
Test Date: 16/04/2025
Report Date: 17/04/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw	Total Coliforms	38	MPN/100 mls	UnAcceptable *
	E. coli	3	MPN/100 mls	UnAcceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	5.48	NTU	
Treated Res Out	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.41	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.031	NTU	
Dist Sanford - 42 Mandon Dr	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.40	mg/L	
	** Total Chlorine	1.58	mg/L	
	** Turbidity	0.06	NTU	
Dist Brunkild - NW 11-7-2 W/Richardson Pioneer off Hwy 3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.99	mg/L	
	** Total Chlorine	1.11	mg/L	
	** Turbidity	0.08	NTU	
Dist Domain - 40088 Rd 3E Pitura Seed	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.95	mg/L	
	** Total Chlorine	1.14	mg/L	
	** Turbidity	0.10	NTU	
Dist Resrvoir in @ Domain - 41108 Rd 5E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.96	mg/L	
	** Total Chlorine	1.13	mg/L	
	** Turbidity	0.04	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.28	mg/L	
	** Total Chlorine	1.45	mg/L	
	** Turbidity	0.07	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled:
16/04/2025

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Sample ID	Analysis	Results	Units	
Dist LaSalle - 9111 Vomer Rd 46NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.06	mg/L	
	** Total Chlorine	1.24	mg/L	
	** Turbidity	0.05	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.36	mg/L	
	** Total Chlorine	1.50	mg/L	
	** Turbidity	0.07	NTU	
Dist Oakbluff - 57 South Landing Dr	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.01	mg/L	
	** Total Chlorine	1.17	mg/L	
	** Turbidity	0.06	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.26	mg/L	
	** Total Chlorine	1.43	mg/L	
	** Turbidity	0.05	NTU	
Dist Starbuck - 51 110 Rd 8W River Oak Dr	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.09	mg/L	
	** Total Chlorine	1.25	mg/L	
	** Turbidity	0.09	NTU	

**Indicate field tests performed by customer.

The test results reported relate only to the samples identified in the "Sample ID" section of the Analysis Certificate as received by Horizon Lab.

*Maximum Acceptable Concentration (MAC) based on the GCDWQ (Guidelines for Canadian Drinking Water Quality) Summary Table (Total Coliform = 0 MPN/100ml / E.Coli = 0 MPN/100ml) https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html Test Method: Analysis of Total Coliforms and E. Coli by Enzyme Substrate Coliform Test, Standard Methods for the Examination of Water and Wastewater, section 9223B. Results are reported as Most Probable Number in 100ml (MPN/100ml). For more information on how to test a well, well disinfection, and how to reduce the risk of well water contamination, please see Manitoba's Water Well Fact Sheets online at www.manitoba.ca/drinkingwater.For general inquiries regarding private wells in Manitoba, please call the office of Drinking Water at 204-945-5762. For technical inquiries and guidance specifically related to private wells, call 204-948-1351.

Issued By:

Tamara Zary

Lab Supervisor

Horizon Lab Ltd.
4055 Portage Avenue Winnipeg, MB R3K 2E8
(204) 488-2035
customerservice@horizonlab.ca
www.horizonlab.ca

HORIZON LAB

Certificate of Analysis
Water Samples

Customer ID:
Date Received: 28/04/2025
Date Sampled: 28/04/2025
Test Date: 28/04/2025
Report Date: 29/04/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw - 1149 Hwy 3	Total Coliforms	276	MPN/100 mls	UnAcceptable *
	E. coli	13	MPN/100 mls	UnAcceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	15.2	NTU	
Treated Res Out - 1149 Hwy 3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.36	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.046	NTU	
Dist Sanford - 28 Mandan Dr	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.34	mg/L	
	** Total Chlorine	1.44	mg/L	
	** Turbidity	0.06	NTU	
Dist Brunkild - 1 Main St	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.37	mg/L	
	** Total Chlorine	1.48	mg/L	
	** Turbidity	0.08	NTU	
Dist Domain - 41073 6E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.51	mg/L	
	** Total Chlorine	1.61	mg/L	
	** Turbidity	0.06	NTU	
Dist Reservoir In @ LaSalle - 92 PR 247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.32	mg/L	
	** Total Chlorine	1.46	mg/L	
	** Turbidity	0.06	NTU	
Dist @ LaSalle Reservoir Out - 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.42	mg/L	
	** Total Chlorine	1.58	mg/L	
	** Turbidity	0.06	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled:28/04/2025

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Sample ID	Analysis	Results	Units	
Dist LaSalle - 63 Rue Principale	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.36	mg/L	
	** Total Chlorine	1.48	mg/L	
	** Turbidity	0.10	NTU	
Dist @ Oakbluff Reservoir Out - 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.28	mg/L	
	** Total Chlorine	1.43	mg/L	
	** Turbidity	0.07	NTU	
Dist Oakbluff - 190 Agripark	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.11	mg/L	
	** Total Chlorine	1.21	mg/L	
	** Turbidity	0.07	NTU	
Dist @ Starbuck Reservoir Out - 7036 Rd. 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.49	mg/L	
	** Total Chlorine	1.64	mg/L	
	** Turbidity	0.06	NTU	
Dist Starbuck - 151 Railway	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.36	mg/L	
	** Total Chlorine	1.48	mg/L	
	** Turbidity	0.06	NTU	

**Indicate field tests performed by customer.

The test results reported relate only to the samples identified in the "Sample ID" section of the Analysis Certificate as received by Horizon Lab.

*Maximum Acceptable Concentration (MAC) based on the GCDWQ (Guidelines for Canadian Drinking Water Quality) Summary Table (Total Coliform = 0 MPN/100ml / E.Coli = 0 MPN/100ml) https://www.canada.ca/en/health-canada/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table.html Test Method: Analysis of Total Coliforms and E. Coli by Enzyme Substrate Coliform Test, Standard Methods for the Examination of Water and Wastewater, section 9223B. Results are reported as Most Probable Number in 100ml (MPN/100ml). For more information on how to test a well, well disinfection, and how to reduce the risk of well water contamination, please see Manitoba's Water Well Fact Sheets online at www.manitoba.ca/drinkingwater.For general inquiries regarding private wells in Manitoba, please call the office of Drinking Water at 204-945-5762. For technical inquiries and guidance specifically related to private wells, call 204-948-1351.

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Tamara Zary

Lab Supervisor

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(204) 488-2035
customerservice@horizonlab.ca
www.horizonlab.ca

Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	MACDONALD REGIONAL 1 - RAW	MACDONALD REGIONAL 2 - TREATED RES OUT	MACDONALD REGIONAL 3 - DISTRIBUTION SANFORD	MACDONALD REGIONAL 3 - DISTRIBUTION BRUNKILD	MACDONALD REGIONAL 3 - DISTRIBUTION DOMAIN
Client sample ID									
Client sampling date / time					12-May-2025 09:05	12-May-2025 09:00	12-May-2025 09:40	12-May-2025 11:55	12-May-2025 12:35
					WP2506407-001	WP2506407-002	WP2506407-003	WP2506407-004	WP2506407-005
					Result	Result	Result	Result	Result
Field Tests									
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L	----	1.39	0.93	0.95	1.53
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L	----	----	1.07	1.13	1.66
Temperature, as received	----	EF001/WP	0.1	°C	16.4	16.4	16.4	16.4	16.4
Turbidity, field	----	EF001/WP	0.01	NTU	10.6	0.043	0.06	0.05	0.10
Microbiological Tests									
Coliforms, total	----	E010/WP	1	MPN/100 mL	165	<1	<1	<1	<1
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL	8	<1	<1	<1	<1

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	MACDONALD REGIONAL 3 - DISTRIBUTION RESERVOIR IN @ 86 PTH 3E Oak Bluff	MACDONALD REGIONAL 3 - DISTRIBUTION @ LA SALLE RESERVOIR OUT 92 PR247E	MACDONALD REGIONAL 3 - DISTRIBUTION LA SALLE 100 Nathan Dr	MACDONALD REGIONAL 3 - DISTRIBUTION @OAK BLUFF RESERVOIR OUT 86 PTH3	MACDONALD REGIONAL 3 - DISTRIBUTION OAK BLUFF 97 Progress Way
Client sampling date / time					12-May-2025 14:30	12-May-2025 13:30	12-May-2025 13:45	12-May-2025 14:27	12-May-2025 15:17
					WP2506407-006	**WP2506407-007**	**WP2506407-008**	**WP2506407-009**	**WP2506407-010**
					Result	Result	Result	Result	Result
Field Tests									
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L	1.31	1.53	1.00	1.41	1.52
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L	1.45	1.60	1.14	1.63	1.60
Temperature, as received	----	EF001/WP	0.1	°C	16.4	16.4	16.4	16.4	16.4
Turbidity, field	----	EF001/WP	0.01	NTU	0.08	0.06	0.11	0.08	0.06
Microbiological Tests									
Coliforms, total	----	E010/WP	1	MPN/100 mL	<1	<1	<1	<1	<1
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL	<1	<1	<1	<1	<1

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	MACDONALD REGIONAL 3 - DISTRIBUTION @ STARBUCK RESERVOIR OUT 7036 Rd. 54NE	MACDONALD REGIONAL 3 - DISTRIBUTION STARBUCK 8048 Halland Dr Rd 52NW	----	----	----
Client sample ID									
Client sampling date / time					12-May-2025 10:05	12-May-2025 10:50	----	----	----
					WP2506407-011	**WP2506407-012**	**----**	**----**	**----**
					Result	Result	----	----	----
Field Tests									
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L	1.41	1.22	----	----	----
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L	1.59	1.48	----	----	----
Temperature, as received	----	EF001/WP	0.1	°C	16.4	16.4	----	----	----
Turbidity, field	----	EF001/WP	0.01	NTU	0.05	0.12	----	----	----
Microbiological Tests									
Coliforms, total	----	E010/WP	1	MPN/100 mL	<1	<1	----	----	----
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL	<1	<1	----	----	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 26/05/2025
Date Sampled: 26/05/2025
Test Date: 26/05/2025
Report Date: 27/05/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw	Total Coliforms	196	MPN/100 mls	UnAcceptable *
	E. coli	2	MPN/100 mls	UnAcceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	9.16	NTU	
Treated Res Out	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.57	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.047	NTU	
Dist Sanford - 188 Mandan Dr	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.89	mg/L	
	** Total Chlorine	1.08	mg/L	
	** Turbidity	0.08	NTU	
Dist Brunkild - PR332 + Hwy3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.23	mg/L	
	** Total Chlorine	1.48	mg/L	
	** Turbidity	0.07	NTU	
Dist Domain - 41 103 MacDonald Rd	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.83	mg/L	
	** Total Chlorine	2.10	mg/L	
	** Turbidity	0.07	NTU	
Dist Reservoir In @ Starbuck	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.43	mg/L	
	** Total Chlorine	1.46	mg/L	
	** Turbidity	0.12	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.49	mg/L	
	** Total Chlorine	1.69	mg/L	
	** Turbidity	0.07	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled:
26/05/2025

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Sample ID	Analysis	Results	Units	
Dist LaSalle 28 PR 247	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.44	mg/L	
	** Total Chlorine	1.65	mg/L	
	** Turbidity	0.06	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.61	mg/L	
	** Total Chlorine	1.75	mg/L	
	** Turbidity	0.05	NTU	
Dist Oakbluff - 233 Bur Oak Dr.	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.29	mg/L	
	** Total Chlorine	1.42	mg/L	
	** Turbidity	0.05	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.47	mg/L	
	** Total Chlorine	1.68	mg/L	
	** Turbidity	0.08	NTU	
Dist Starbuck - 11 Main Street	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.30	mg/L	
	** Total Chlorine	1.42	mg/L	
	** Turbidity	0.09	NTU	

**Indicate field tests performed by customer.

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www.horizonlab.ca

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 11/06/2025
Date Sampled: 11/06/2025
Test Date: 11/06/2025
Report Date: 12/06/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw - 1149 Hwy 3	Total Coliforms	248	MPN/100 mls	UnAcceptable *
	E. coli	6	MPN/100 mls	UnAcceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	8.33	NTU	
Treated - Res Out 1149 HWY 3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.24	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.056	NTU	
Dist - Sanford 41158 6E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.02	mg/L	
	** Total Chlorine	1.14	mg/L	
	** Turbidity	0.06	NTU	
Dist - Brunkild 42024 8W	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.02	mg/L	
	** Total Chlorine	1.12	mg/L	
	** Turbidity	0.06	NTU	
Dist - Domain 7094 41E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.22	mg/L	
	** Total Chlorine	1.31	mg/L	
	** Turbidity	0.11	NTU	
Dist - Reservoir in @ Brunkild 6 PR 332	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.22	mg/L	
	** Total Chlorine	1.33	mg/L	
	** Turbidity	0.10	NTU	
Dist @ Lasalle Res Out 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.37	mg/L	
	** Total Chlorine	1.46	mg/L	
	** Turbidity	0.07	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled:
11/06/2025

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Sample ID	Analysis	Results	Units	
Dist - Lasalle 51106 HWY 330	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.14	mg/L	
	** Total Chlorine	1.27	mg/L	
	** Turbidity	0.09	NTU	
Dist - OakBluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.24	mg/L	
	** Total Chlorine	1.42	mg/L	
	** Turbidity	0.06	NTU	
Dist - OakBluff 100-400 Fort Whyte Way	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.20	mg/L	
	** Total Chlorine	1.40	mg/L	
	** Turbidity	0.08	NTU	
Dist - Satrbuck Reservoir Out 70036 Rd 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.57	mg/L	
	** Total Chlorine	1.76	mg/L	
	** Turbidity	0.09	NTU	
Dist - Starbuck 47154	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.60	mg/L	
	** Total Chlorine	1.82	mg/L	
	** Turbidity	0.09	NTU	

**Indicate field tests performed by customer.

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HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 23/06/2025
Date Sampled: 23/06/2025
Test Date: 23/06/2025
Report Date: 24/06/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw	Total Coliforms	579	MPN/100 mls	UnAcceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	8.36	NTU	
Treated Res Out	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.32	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.044	NTU	
Dist - Sanford 130 Blythefield Rd	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.86	mg/L	
	** Total Chlorine	0.97	mg/L	
	** Turbidity	0.15	NTU	
Dist - Brunkild Hwy 3 PTH 332	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.16	mg/L	
	** Total Chlorine	1.35	mg/L	
	** Turbidity	0.05	NTU	
Dist - Domain 41 116 MacDonald Rd 6E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.79	mg/L	
	** Total Chlorine	0.93	mg/L	
	** Turbidity	0.06	NTU	
Dist - Reservoir IN @ Domain - 41 108 RD 6E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.21	mg/L	
	** Total Chlorine	1.35	mg/L	
	** Turbidity	0.06	NTU	
Dist @ LaSalle Reservoir OUT 92 PR47E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.24	mg/L	
	** Total Chlorine	1.42	mg/L	
	** Turbidity	0.07	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled:
23/06/2025

Sample ID	Analysis	Results	Units	
Dist - LaSalle 43 Rue Beaudry	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.21	mg/L	
	** Total Chlorine	1.37	mg/L	
	** Turbidity	0.09	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.05	mg/L	
	** Total Chlorine	1.16	mg/L	
	** Turbidity	0.06	NTU	
Dist - Oakbluff 155 Agri Park Rd	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.77	mg/L	
	** Total Chlorine	0.91	mg/L	
	** Turbidity	0.09	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.45	mg/L	
	** Total Chlorine	1.57	mg/L	
	** Turbidity	0.09	NTU	
Dist - Starbuck 40 Arena Blvd	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.22	mg/L	
	** Total Chlorine	1.36	mg/L	
	** Turbidity	0.05	NTU	
Dist @ McGillvary Reservoir Out 54008 Rd 9E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.15	mg/L	
	** Total Chlorine	1.28	mg/L	
	** Turbidity	0.15	NTU	
Dist - McGillvary 405 Fort Whyte Way	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.14	mg/L	
	** Total Chlorine	1.32	mg/L	
	** Turbidity	0.07	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 07/07/2025
Date Sampled: 07/07/2025
Test Date: 07/07/2025
Report Date: 08/07/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw	Total Coliforms	>2420	MPN/100 mls	UnAcceptable *
	E. coli	2	MPN/100 mls	UnAcceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	8.74	NTU	
Treated Res Out	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.32	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.046	NTU	
Dist Sanford - 58 247 NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.26	mg/L	
	** Total Chlorine	1.42	mg/L	
	** Turbidity	0.06	NTU	
Dist Brunkild - 3 062 Rd 39 NW	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.55	mg/L	
	** Total Chlorine	0.57	mg/L	
	** Turbidity	0.07	NTU	
Dist Domain - 40 088 Rd 4 E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.94	mg/L	
	** Total Chlorine	1.06	mg/L	
	** Turbidity	0.09	NTU	
Dist Reservoir In @ LaSalle	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.21	mg/L	
	** Total Chlorine	1.42	mg/L	
	** Turbidity	0.06	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.12	mg/L	
	** Total Chlorine	1.29	mg/L	
	** Turbidity	0.07	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled:
07/07/2025

Sample ID	Analysis	Results	Units	
Dist LaSalle - 51 134 PR 330	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.84	mg/L	
	** Total Chlorine	1.01	mg/L	
	** Turbidity	0.09	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.09	mg/L	
	** Total Chlorine	1.15	mg/L	
	** Turbidity	0.08	NTU	
Dist Oakbluff - 3700 McGillivray Blvd	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.35	mg/L	
	** Total Chlorine	1.46	mg/L	
	** Turbidity	0.10	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	0.90	mg/L	
	** Total Chlorine	0.97	mg/L	
	** Turbidity	0.07	NTU	
Dist Starbuck - 5075 Rd 48 NW	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.29	mg/L	
	** Total Chlorine	1.45	mg/L	
	** Turbidity	0.07	NTU	
Dist @ McGillivray Reservoir Out 54008 Rd. 9E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.28	mg/L	
	** Total Chlorine	1.43	mg/L	
	** Turbidity	0.15	NTU	
Dist McGillvray - 104-505 Fort Whyte Way	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.11	mg/L	
	** Total Chlorine	1.23	mg/L	
	** Turbidity	0.08	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Customer ID:
Date Received: 21/07/2025
Date Sampled: 21/07/2025
Test Date: 21/07/2025
Report Date: 22/07/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw	Total Coliforms	>2420	MPN/100 mls	UnAcceptable *
	E. coli	1	MPN/100 mls	UnAcceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	9.90	NTU	
Treated Res Out	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.40	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.06	NTU	
Dist Sanford - 28 Mandan Dr	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.31	mg/L	
	** Total Chlorine	1.43	mg/L	
	** Turbidity	0.07	NTU	
Dist Brunkild - 10 First Ave	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.32	mg/L	
	** Total Chlorine	1.45	mg/L	
	** Turbidity	0.07	NTU	
Dist Domain - 41107 6E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.04	mg/L	
	** Total Chlorine	1.17	mg/L	
	** Turbidity	0.11	NTU	
Dist Reservoir In @ Oak Bluff 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.04	mg/L	
	** Total Chlorine	1.22	mg/L	
	** Turbidity	0.07	NTU	
Dist @ Lasalle Reservoir out 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.26	mg/L	
	** Total Chlorine	1.42	mg/L	
	** Turbidity	0.09	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled:
21/07/2025

Sample ID	Analysis	Results	Units	
Dist Lasalle - 80 PR 247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.19	mg/L	
	** Total Chlorine	1.31	mg/L	
	** Turbidity	0.07	NTU	
Dist@Oakbluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.25	mg/L	
	** Total Chlorine	1.37	mg/L	
	** Turbidity	0.05	NTU	
Dist Oakbluff - 34A PTH 3E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.22	mg/L	
	** Total Chlorine	1.34	mg/L	
	** Turbidity	0.07	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.39	mg/L	
	** Total Chlorine	1.59	mg/L	
	** Turbidity	0.06	NTU	
Dist Starbuck - 20 Main Street	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.37	mg/L	
	** Total Chlorine	1.50	mg/L	
	** Turbidity	0.07	NTU	
Dist @ McGillivray Reservoir Out 54008 Rd. 9E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.10	mg/L	
	** Total Chlorine	1.17	mg/L	
	** Turbidity	0.13	NTU	
Dist Mcgillivray - 27 South Landing	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.08	mg/L	
	** Total Chlorine	1.29	mg/L	
	** Turbidity	0.10	NTU	

Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MACDONALD REGIONAL 1 - RAW 1149 HWY 3	MACDONALD REGIONAL 2 - TREATED RES OUT 1149 HWY 3	MACDONALD REGIONAL 3 - DISTRIBUTION SANFORD 41157 6E	MACDONALD REGIONAL 3 - DISTRIBUTION BRUNKILD	MACDONALD REGIONAL 3 - DISTRIBUTION DOMAIN 7094 41 NE
					Client sampling date / time	06-Aug-2025 08:40	06-Aug-2025 08:45	06-Aug-2025 12:30	06-Aug-2025 11:20	06-Aug-2025 11:55
						WP2512820-001	WP2512820-002	WP2512820-003	WP2512820-004	WP2512820-005
						Result	Result	Result	Result	Result
Field Tests										
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L		----	1.44	1.10	0.90	1.63
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L		----	----	1.20	1.02	1.73
Temperature, as received	----	EF001/WP	0.1	°C		20.9	20.9	20.9	20.9	20.9
Turbidity, field	----	EF001/WP	0.01	NTU		6.91	0.06	0.08	0.07	0.09
Microbiological Tests										
Coliforms, total	----	E010/WP	1	MPN/100 mL		>200	<1	<1	<1	<1
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL		<1	<1	<1	<1	<1

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID: MACDONALD REGIONAL 3 - DISTRIBUTION RESERVOIR IN @ Starbuck	MACDONALD REGIONAL 3 - DISTRIBUTION @ LA SALLE RESERVOIR OUT 92 PR247E	MACDONALD REGIONAL 3 - DISTRIBUTION LA SALLE 51134 PR 330	MACDONALD REGIONAL 3 - DISTRIBUTION @OAK BLUFF RESERVOIR OUT 86 PTH3	MACDONALD REGIONAL 3 - DISTRIBUTION OAK BLUFF 54008 9E Incoming
					Client sampling date / time: 06-Aug-2025 09:55	06-Aug-2025 13:05	06-Aug-2025 13:30	06-Aug-2025 13:55	06-Aug-2025 14:35
					WP2512820-006	WP2512820-007	WP2512820-008	WP2512820-009	WP2512820-010
					Result	Result	Result	Result	Result
Field Tests									
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L	1.10	1.27	1.10	1.30	1.28
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L	1.18	1.44	1.23	1.43	1.44
Temperature, as received	----	EF001/WP	0.1	°C	20.9	20.9	20.9	20.9	20.9
Turbidity, field	----	EF001/WP	0.01	NTU	0.08	0.06	0.09	0.06	0.09
Microbiological Tests									
Coliforms, total	----	E010/WP	1	MPN/100 mL	<1	<1	<1	<1	<1
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL	<1	<1	<1	<1	<1

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

					Client sample ID	MACDONALD REGIONAL 3 - DISTRIBUTION @ STARBUCK RESERVOIR OUT 7036 Rd. 54NE	MACDONALD REGIONAL 3 - DISTRIBUTION STARBUCK 10149 S2 NW	MACDONALD REGIONAL 3 - DISTRIBUTION @ MCGILLIVRAY RESERVOIR OUT 54008 Rd. 9E	MACDONALD REGIONAL 3 - DISTRIBUTION MCGILLIVRAY	----
					Client sampling date / time	06-Aug-2025 09:45	06-Aug-2025 10:24	06-Aug-2025 14:54	06-Aug-2025 15:11	----
Analyte	CAS Number	Method/Lab	LOR	Unit		WP2512820-011	WP2512820-012	WP2512820-013	WP2512820-014	----
						Result	Result	Result	Result	----
Field Tests										
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L		1.44	0.96	1.37	1.50	----
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L		1.60	1.13	1.60	1.63	----
Temperature, as received	----	EF001/WP	0.1	°C		20.9	20.9	20.9	20.9	----
Turbidity, field	----	EF001/WP	0.01	NTU		0.08	0.07	0.15	0.09	----
Microbiological Tests										
Coliforms, total	----	E010/WP	1	MPN/100 mL		<1	<1	<1	<1	----
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL		<1	<1	<1	<1	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

HORIZON LAB

Certificate of Analysis
Water Samples

Customer ID:
Date Received: 18/08/2025
Date Sampled: 18/08/2025
Test Date: 18/08/2025
Report Date: 19/08/2025

Test Package: B1P
Project:

Sample ID	Analysis	Results	Units	
Raw	Total Coliforms	>2420	MPN/100 mls	UnAcceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	9.75	NTU	
Treated Res Out	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.41	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.057	NTU	
Dist Sanford - 20A River Cres.	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.34	mg/L	
	** Total Chlorine	1.46	mg/L	
	** Turbidity	0.06	NTU	
Dist Brunkild - Hwy 3 + PR332	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.38	mg/L	
	** Total Chlorine	1.46	mg/L	
	** Turbidity	0.06	NTU	
Dist Domain - 41061 MacDonald Rd	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.24	mg/L	
	** Total Chlorine	1.44	mg/L	
	** Turbidity	0.06	NTU	
Dist Reservoir in @ Brunkild	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.31	mg/L	
	** Total Chlorine	1.51	mg/L	
	** Turbidity	0.09	NTU	
Dist @ LaSalle Reservoir Out - 92 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.52	mg/L	
	** Total Chlorine	1.68	mg/L	
	** Turbidity	0.05	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled:
18/08/2025

Sample ID	Analysis	Results	Units	
Dist LaSalle - 28 PR247E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.45	mg/L	
	** Total Chlorine	1.65	mg/L	
	** Turbidity	0.06	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.46	mg/L	
	** Total Chlorine	1.64	mg/L	
	** Turbidity	0.04	NTU	
DIst Oakbluff - 130 Agri Park Rd	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.16	mg/L	
	** Total Chlorine	1.32	mg/L	
	** Turbidity	0.07	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.55	mg/L	
	** Total Chlorine	1.65	mg/L	
	** Turbidity	0.07	NTU	
Dist Starbuck - 21 Main Street	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.08	mg/L	
	** Total Chlorine	1.11	mg/L	
	** Turbidity	0.04	NTU	
Dist @ McGillivray Reservoir Out - 54008 Rd. 9E	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.57	mg/L	
	** Total Chlorine	1.70	mg/L	
	** Turbidity	0.14	NTU	
Dist McGillivray - 103 Progress Way	Total Coliforms	0	MPN/100 mls	Acceptable *
	E. coli	0	MPN/100 mls	Acceptable *
	** Free Chlorine	1.40	mg/L	
	** Total Chlorine	1.59	mg/L	
	** Turbidity	0.06	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 03/09/2025
Date Sampled:** 03/09/2025
Test Date: 03/09/2025
Report Date: 04/09/2025

Test Package: B1P
Project:

Sample Description**/UID	Analysis	Results	Units	
Raw B1-030925-7-1	Total Coliforms	>2420	MPN/100 mls	UnAcceptable [1]
	E. coli	1	MPN/100 mls	UnAcceptable [1]
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	8.84	NTU	
Treated Res Out B1-030925-7-2	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.32	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.06	NTU	
Dist - Sanford 41 157 Macdonald Rd B1-030925-7-3	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.82	mg/L	
	** Total Chlorine	0.90	mg/L	
	** Turbidity	0.05	NTU	
Dist - Brunkild 4 006 PR335 B1-030925-7-4	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.13	mg/L	
	** Total Chlorine	1.25	mg/L	
	** Turbidity	0.06	NTU	
Dist - Domain 40 088 Rd4E B1-030925-7-5	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.94	mg/L	
	** Total Chlorine	1.05	mg/L	
	** Turbidity	0.09	NTU	
Dist - Reservoir In @ Domain B1-030925-7-6	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.75	mg/L	
	** Total Chlorine	0.91	mg/L	
	** Turbidity	0.04	NTU	
Dist - @LaSalle Reservoir Out 92 PR247E B1-030925-7-7	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.96	mg/L	
	** Total Chlorine	1.22	mg/L	
	** Turbidity	0.07	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Customer Information*
Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled**: 03/09/2025

Sample Description**/UID	Analysis	Results	Units	
Dist - LaSalle 51 133 Rd10E B1-030925-7-8	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.50	mg/L	
	** Total Chlorine	0.60	mg/L	
	** Turbidity	0.05	NTU	
Dist - @Oakbluff Reservoir Out 86 PTH3 B1-030925-7-9	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.85	mg/L	
	** Total Chlorine	1.02	mg/L	
	** Turbidity	0.08	NTU	
Dist - Oakbluff 4900 McGillivray B1-030925-7-10	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.79	mg/L	
	** Total Chlorine	0.96	mg/L	
	** Turbidity	0.07	NTU	
Dist - @Starbuck Reservoir Out 7036 Rd. 54NE B1-030925-7-11	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.15	mg/L	
	** Total Chlorine	1.38	mg/L	
	** Turbidity	0.07	NTU	
Dist - Starbuck 51 158 PR332 B1-030925-7-12	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.70	mg/L	
	** Total Chlorine	0.83	mg/L	
	** Turbidity	0.05	NTU	
Dist - @McGillivray Reservoir Out 54008 Rd. 9E B1-030925-7-13	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.26	mg/L	
	** Total Chlorine	1.51	mg/L	
	** Turbidity	0.50	NTU	
Dist - McGillvray 171 Samborski Dr. B1-030925-7-14	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.30	mg/L	
	** Total Chlorine	1.38	mg/L	
	** Turbidity	0.08	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 15/09/2025
Date Sampled:** 15/09/2025
Test Date: 15/09/2025
Report Date: 16/09/2025

Test Package: B1P
Project:

Sample Description**/UID	Analysis	Results	Units	
Raw B1-150925-12-1	Total Coliforms	>2420	MPN/100 mls	UnAcceptable [1]
	E. coli	172	MPN/100 mls	UnAcceptable [1]
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	9.18	NTU	
Treated Res Out B1-150925-12-2	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.55	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.054	NTU	
Dist - Sanford 5 Main St B1-150925-12-3	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.99	mg/L	
	** Total Chlorine	1.11	mg/L	
	** Turbidity	0.04	NTU	
Dist - Brunkild 10 First Ave B1-150925-12-4	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.13	mg/L	
	** Total Chlorine	1.23	mg/L	
	** Turbidity	0.07	NTU	
Dist - Domain 41 116 MacDonald Rd 6E B1-150925-12-5	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.14	mg/L	
	** Total Chlorine	1.33	mg/L	
	** Turbidity	0.07	NTU	
Dist - Reservoir In @ LaSalle 92 PR 247E B1-150925-12-6	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.24	mg/L	
	** Total Chlorine	1.34	mg/L	
	** Turbidity	0.10	NTU	
Dist - @LaSalle Reservoir Out 92 PR247E B1-150925-12-7	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.31	mg/L	
	** Total Chlorine	1.41	mg/L	
	** Turbidity	0.06	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Customer Information*
Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled**: 15/09/2025

Sample Description**/UID	Analysis	Results	Units	
Dist - LaSalle 43 Rue Beaudry B1-150925-12-8	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.24	mg/L	
	** Total Chlorine	1.41	mg/L	
	** Turbidity	0.10	NTU	
Dist - @Oakbluff Reservoir Out 86 PTH3 B1-150925-12-9	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.36	mg/L	
	** Total Chlorine	1.50	mg/L	
	** Turbidity	0.07	NTU	
Dist - Oakbluff 155 Agri Park Rd B1-150925-12-10	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.20	mg/L	
	** Total Chlorine	1.26	mg/L	
	** Turbidity	0.11	NTU	
Dist - @Starbuck Reservoir Out 7036 Rd. 54NE B1-150925-12-11	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.04	mg/L	
	** Total Chlorine	1.25	mg/L	
	** Turbidity	0.07	NTU	
Dist - Starbuck 40 Arena Blvd B1-150925-12-12	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.97	mg/L	
	** Total Chlorine	1.11	mg/L	
	** Turbidity	0.06	NTU	
Dist - @McGillivray Reservoir Out 54008 Rd. 9E B1-150925-12-13	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.63	mg/L	
	** Total Chlorine	1.77	mg/L	
	** Turbidity	0.10	NTU	
Dist - McGillivray 22 South Landing Drive B1-150925-12-14	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.58	mg/L	
	** Total Chlorine	1.84	mg/L	
	** Turbidity	0.12	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 29/09/2025
Date Sampled:** 29/09/2025
Test Date: 29/09/2025
Report Date: 30/09/2025

Test Package: B1P
Project:

Sample Description**/UID	Analysis	Results	Units	
Raw B1-290925-6-1	Total Coliforms	>2420	MPN/100 mls	UnAcceptable [1]
	E. coli	88	MPN/100 mls	UnAcceptable [1]
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	11.0	NTU	
Treated Res Out B1-290925-6-2	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.56	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.038	NTU	
Dist Sanford - 58 PR 247 B1-290925-6-3	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.28	mg/L	
	** Total Chlorine	1.41	mg/L	
	** Turbidity	0.06	NTU	
Dist Brunkild - 11095 Rd 36N B1-290925-6-4	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.80	mg/L	
	** Total Chlorine	0.91	mg/L	
	** Turbidity	0.12	NTU	
Dist Domain - 7 094 Rd 41 NE B1-290925-6-5	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.73	mg/L	
	** Total Chlorine	0.84	mg/L	
	** Turbidity	0.08	NTU	
Dist Reservoir In @ Oak Bluff B1-290925-6-6	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.34	mg/L	
	** Total Chlorine	1.41	mg/L	
	** Turbidity	0.07	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E B1-290925-6-7	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.42	mg/L	
	** Total Chlorine	1.59	mg/L	
	** Turbidity	0.05	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Customer Information*
Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled**: 29/09/2025

Sample Description**/UID	Analysis	Results	Units	
Dist LaSalle - 51 106 PR 330 B1-290925-6-8	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.61	mg/L	
	** Total Chlorine	0.74	mg/L	
	** Turbidity	0.06	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3 B1-290925-6-9	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.38	mg/L	
	** Total Chlorine	1.51	mg/L	
	** Turbidity	0.08	NTU	
Dist Oakbluff - 7083 La Verendryse Rd B1-290925-6-10	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.17	mg/L	
	** Total Chlorine	1.31	mg/L	
	** Turbidity	0.10	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE B1-290925-6-11	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.97	mg/L	
	** Total Chlorine	1.15	mg/L	
	** Turbidity	0.08	NTU	
Dist Starbuck - 5075 Rd 48 NW B1-290925-6-12	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.67	mg/L	
	** Total Chlorine	0.78	mg/L	
	** Turbidity	0.04	NTU	
Dist @ McGillivray Reservoir Out 54008 Rd. 9E B1-290925-6-13	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.38	mg/L	
	** Total Chlorine	1.48	mg/L	
	** Turbidity	0.13	NTU	
Dist McGillivray - 57 South Landing B1-290925-6-14	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.31	mg/L	
	** Total Chlorine	1.47	mg/L	
	** Turbidity	0.07	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 15/10/2025
Date Sampled:** 15/10/2025
Test Date: 15/10/2025
Report Date: 16/10/2025

Test Package: B1P
Project:

Sample Description**/UID	Analysis	Results	Units	
Raw B1-151025-6-1	Total Coliforms	>2420	MPN/100 mls	UnAcceptable [1]
	E. coli	770	MPN/100 mls	UnAcceptable [1]
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	14.5	NTU	
Treated Res Out B1-151025-6-2	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.57	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.086	NTU	
Dist - Sanford 5 Evergreen P1 B1-151025-6-3	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.30	mg/L	
	** Total Chlorine	1.56	mg/L	
	** Turbidity	0.08	NTU	
Dist - Brunkild 25 Main St B1-151025-6-4	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.96	mg/L	
	** Total Chlorine	1.12	mg/L	
	** Turbidity	0.06	NTU	
Dist - Domain 41 037 Macdonald Rd 6E B1-151025-6-5	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.89	mg/L	
	** Total Chlorine	1.03	mg/L	
	** Turbidity	0.10	NTU	
Dist - Reservoir In @ Starbuck 7036 Rd 54NE B1-151025-6-6	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.02	mg/L	
	** Total Chlorine	1.26	mg/L	
	** Turbidity	0.09	NTU	
Dist - @LaSalle Reservoir Out 92 PR247E B1-151025-6-7	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.36	mg/L	
	** Total Chlorine	1.58	mg/L	
	** Turbidity	0.05	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Customer Information*
Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled**: 15/10/2025

Sample Description**/UID	Analysis	Results	Units	
Dist - LaSalle 31 Rue Gaudry B1-151025-6-8	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.92	mg/L	
	** Total Chlorine	1.14	mg/L	
	** Turbidity	0.07	NTU	
Dist - @Oakbluff Reservoir Out 86 PTH3 B1-151025-6-9	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.37	mg/L	
	** Total Chlorine	1.54	mg/L	
	** Turbidity	0.06	NTU	
Dist - Oakbluff 5 Casselman Cres B1-151025-6-10	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.29	mg/L	
	** Total Chlorine	1.45	mg/L	
	** Turbidity	0.05	NTU	
Dist - @Starbuck Reservoir Out 7036 Rd. 54NE B1-151025-6-11	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.38	mg/L	
	** Total Chlorine	1.59	mg/L	
	** Turbidity	0.09	NTU	
Dist - Starbuck 110 Maskrey Dr B1-151025-6-12	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.10	mg/L	
	** Total Chlorine	1.28	mg/L	
	** Turbidity	0.07	NTU	
Dist - @McGillivray Reservoir Out 54008 Rd. 9E B1-151025-6-13	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.12	mg/L	
	** Total Chlorine	1.29	mg/L	
	** Turbidity	0.09	NTU	
Dist - McGillivray 54 009 LaSalle Rd 9E B1-151025-6-14	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.08	mg/L	
	** Total Chlorine	1.19	mg/L	
	** Turbidity	0.07	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 27/10/2025
Date Sampled:** 27/10/2025
Test Date: 27/10/2025
Report Date: 28/10/2025

Test Package: B1P
Project:

Sample Description**/UID	Analysis	Results	Units	
Raw B1-271025-5-1	Total Coliforms	>2420	MPN/100 mls	UnAcceptable [1]
	E. coli	548	MPN/100 mls	UnAcceptable [1]
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	17.8	NTU	
Treated Res Out B1-271025-5-2	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.42	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.070	NTU	
Dist - Sanford 42 Mandan Dr B1-271025-5-3	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.85	mg/L	
	** Total Chlorine	1.02	mg/L	
	** Turbidity	0.07	NTU	
Dist - Brunkild "NW11-7-2W"/RD 38NW Hwy 3-Pioneer B1-271025-5-4	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.85	mg/L	
	** Total Chlorine	0.92	mg/L	
	** Turbidity	0.09	NTU	
Dist - Domain 40 088 Rd 3E B1-271025-5-5	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.88	mg/L	
	** Total Chlorine	1.03	mg/L	
	** Turbidity	0.08	NTU	
Dist - Reservoir In @ Brunkild 6 PR 332 B1-271025-5-6	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.94	mg/L	
	** Total Chlorine	1.14	mg/L	
	** Turbidity	0.11	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E B1-271025-5-7	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.22	mg/L	
	** Total Chlorine	1.43	mg/L	
	** Turbidity	0.09	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Customer Information*
Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled**: 27/10/2025

Sample Description**/UID	Analysis	Results	Units	
Dist - LaSalle 51 134 Pr330 - Brett Young B1-271025-5-8	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.95	mg/L	
	** Total Chlorine	1.08	mg/L	
	** Turbidity	0.11	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3 B1-271025-5-9	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.04	mg/L	
	** Total Chlorine	1.16	mg/L	
	** Turbidity	0.07	NTU	
Dist - Oakbluff 225 Industrial Rd - Sollio Agri B1-271025-5-10	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.36	mg/L	
	** Total Chlorine	0.48	mg/L	
	** Turbidity	0.008	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE B1-271025-5-11	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.15	mg/L	
	** Total Chlorine	1.36	mg/L	
	** Turbidity	0.09	NTU	
Dist - Starbuck 149 Railway St - Pioneer B1-271025-5-12	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.96	mg/L	
	** Total Chlorine	1.04	mg/L	
	** Turbidity	0.06	NTU	
Dist @ McGillivray Reservoir Out 54008 Rd. 9E B1-271025-5-13	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.06	mg/L	
	** Total Chlorine	1.19	mg/L	
	** Turbidity	0.08	NTU	
Dist - McGillivray 132 Samborski Dr B1-271025-5-14	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.01	mg/L	
	** Total Chlorine	1.14	mg/L	
	** Turbidity	0.19	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 12/11/2025
Date Sampled:** 12/11/2025
Test Date: 12/11/2025
Report Date: 13/11/2025

Test Package: B1P
Project:

Sample Description**/UID	Analysis	Results	Units	
Raw B1-121125-11-1	Total Coliforms	1553	MPN/100 mls	UnAcceptable [1]
	E. coli	115	MPN/100 mls	UnAcceptable [1]
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	14.9	NTU	
Treated Res Out B1-121125-11-2	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.67	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.052	NTU	
Dist - Sanford 66 River Grove B1-121125-11-3	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.17	mg/L	
	** Total Chlorine	1.41	mg/L	
	** Turbidity	0.14	NTU	
Dist - Brunkild 11 MB-332 B1-121125-11-4	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.04	mg/L	
	** Total Chlorine	1.14	mg/L	
	** Turbidity	0.10	NTU	
Dist - Domain 41037 PR 330 B1-121125-11-5	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.02	mg/L	
	** Total Chlorine	1.16	mg/L	
	** Turbidity	0.07	NTU	
Dist - Reservoir In @ McGillivray - 54 008 9E B1-121125-11-6	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.13	mg/L	
	** Total Chlorine	1.26	mg/L	
	** Turbidity	0.12	NTU	
Dist - @LaSalle Reservoir Out 92 PR247E B1-121125-11-7	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.34	mg/L	
	** Total Chlorine	1.51	mg/L	
	** Turbidity	0.12	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Customer Information*
Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled**: 12/11/2025

Sample Description**/UID	Analysis	Results	Units	
Dist - LaSalle 14 Devos Dr B1-121125-11-8	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.06	mg/L	
	** Total Chlorine	1.14	mg/L	
	** Turbidity	0.08	NTU	
Dist - @Oakbluff Reservoir Out 86 PTH3 B1-121125-11-9	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.08	mg/L	
	** Total Chlorine	1.25	mg/L	
	** Turbidity	0.08	NTU	
Dist - Oakbluff 5 Blacksmith St B1-121125-11-10	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.47	mg/L	
	** Total Chlorine	0.55	mg/L	
	** Turbidity	0.11	NTU	
Dist - @Starbuck Reservoir Out 7036 Rd. 54NE B1-121125-11-11	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.24	mg/L	
	** Total Chlorine	1.40	mg/L	
	** Turbidity	0.10	NTU	
Dist - Starbuck B1-121125-11-12	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.14	mg/L	
	** Total Chlorine	1.27	mg/L	
	** Turbidity	0.09	NTU	
Dist - @McGillivray Reservoir Out 54008 Rd. 9E B1-121125-11-13	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.33	mg/L	
	** Total Chlorine	1.46	mg/L	
	** Turbidity	0.27	NTU	
Dist - McGillivray 57 South Lamding Dr B1-121125-11-14	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.16	mg/L	
	** Total Chlorine	1.34	mg/L	
	** Turbidity	0.20	NTU	

Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MACDONALD REGIONAL 1 - RAW	MACDONALD REGIONAL 2 - TREATED RES OUT	MACDONALD REGIONAL 3 - DISTRIBUTION SANFORD 41157 6E	MACDONALD REGIONAL 3 - DISTRIBUTION BRUNKILD 7080 38 NW	MACDONALD REGIONAL 3 - DISTRIBUTION DOMAIN 7094 41 NE
					Client sampling date / time	24-Nov-2025 08:30	24-Nov-2025 08:43	24-Nov-2025 12:15	24-Nov-2025 11:15	24-Nov-2025 11:44
						WP2520371-001	WP2520371-002	WP2520371-003	WP2520371-004	WP2520371-005
						Result	Result	Result	Result	Result
Field Tests										
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L		----	1.43	0.96	0.84	0.86
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L		----	----	1.11	0.90	0.97
Temperature, as received	----	EF001/WP	0.1	°C		13.4	13.4	13.4	13.4	13.4
Turbidity, field	----	EF001/WP	0.01	NTU		6.961	0.081	0.10	0.08	0.07
Microbiological Tests										
Coliforms, total	----	E010/WP	1	MPN/100 mL		144	<1	<1	<1	<1
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL		9	<1	<1	<1	<1

Please refer to the General Comments section for an explanation of any qualifiers detected.

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Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MACDONALD REGIONAL 3 - DISTRIBUTION RESERVOIR IN @ Starbuck 7036 52N	MACDONALD REGIONAL 3 - DISTRIBUTION @ LA SALLE RESERVOIR OUT 92 PR 247E	MACDONALD REGIONAL 3 - DISTRIBUTION LA SALLE 51134 PR 330	MACDONALD REGIONAL 3 - DISTRIBUTION @ OAKBLUFF RESERVPOIR OUT 86 PTH 3	MACDONALD REGIONAL 3 - DISTRIBUTION OAKBLUFF 4900 Mcgillivray Blvd
					Client sampling date / time	24-Nov-2025 09:55	24-Nov-2025 12:30	24-Nov-2025 12:52	24-Nov-2025 14:10	24-Nov-2025 13:48
						WP2520371-006	WP2520371-007	WP2520371-008	WP2520371-009	WP2520371-010
						Result	Result	Result	Result	Result
Field Tests										
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L		0.98	1.21	1.09	1.24	0.92
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L		1.10	1.40	1.19	1.44	1.04
Temperature, as received	----	EF001/WP	0.1	°C		13.4	13.4	13.4	13.4	13.4
Turbidity, field	----	EF001/WP	0.01	NTU		0.08	0.08	0.09	0.09	0.10
Microbiological Tests										
Coliforms, total	----	E010/WP	1	MPN/100 mL		<1	<1	<1	<1	<1
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL		<1	<1	<1	<1	<1

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Drinking Water
(Matrix: Water)

Analyte	CAS Number	Method/Lab	LOR	Unit	Client sample ID	MACDONALD REGIONAL 3 - DISTRIBUTION @ STARBUCK RESERVOIR OUT 7036 Rd. 54NE	MACDONALD REGIONAL 3 - DISTRIBUTION STARBUCK 51160 8W River Road	MACDONALD REGIONAL 3 - DISTRIBUTION @ MCGILLIVRAY RESERVOIR OUT 54008 Rd. 9E	MACDONALD REGIONAL 3 - DISTRIBUTION MCGILLIVRAY 100-105 Fordt Whyte	----
					Client sampling date / time	24-Nov-2025 09:45	24-Nov-2025 10:23	24-Nov-2025 13:15	24-Nov-2025 13:30	----
						WP2520371-011	WP2520371-012	WP2520371-013	WP2520371-014	----
						Result	Result	Result	Result	----
Field Tests										
Chlorine, free, field	7782-50-5	EF001/WP	0.01	mg/L		1.07	0.93	1.01	1.04	----
Chlorine, total, field	7782-50-5	EF001/WP	0.01	mg/L		1.22	1.09	1.10	1.09	----
Temperature, as received	----	EF001/WP	0.1	°C		13.4	13.4	13.4	13.4	----
Turbidity, field	----	EF001/WP	0.01	NTU		0.08	0.10	0.15	0.10	----
Microbiological Tests										
Coliforms, total	----	E010/WP	1	MPN/100 mL		<1	<1	<1	<1	----
Coliforms, Escherichia coli [E. coli]	----	E010/WP	1	MPN/100 mL		<1	<1	<1	<1	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

HORIZON LAB

Certificate of Analysis
Water Samples

Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Customer ID:
Date Received: 10/12/2025
Date Sampled:** 10/12/2025
Test Date: 10/12/2025
Report Date: 11/12/2025

Test Package: B1P
Project:

Sample Description**/UID	Analysis	Results	Units	
Raw - 1149 Hwy 3 B1-101225-6-1	Total Coliforms	28	MPN/100 mls	UnAcceptable [1]
	E. coli	2	MPN/100 mls	UnAcceptable [1]
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	4.24	NTU	
Treated Res Out - 1149 Hwy 3 B1-101225-6-2	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.52	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.088	NTU	
Dist Sanford - 28 Mandan Dr B1-101225-6-3	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.20	mg/L	
	** Total Chlorine	1.32	mg/L	
	** Turbidity	0.09	NTU	
Dist - Brunkild 10 First Street B1-101225-6-4	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.32	mg/L	
	** Total Chlorine	1.43	mg/L	
	** Turbidity	0.08	NTU	
Dist - Domain 41107 6E B1-101225-6-5	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.56	mg/L	
	** Total Chlorine	1.66	mg/L	
	** Turbidity	0.09	NTU	
Dist Resrvoir in @ Domain - 41108 6E B1-101225-6-6	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.63	mg/L	
	** Total Chlorine	0.78	mg/L	
	** Turbidity	0.05	NTU	
Dist @ LaSalle Reservoir Out 92 PR247E B1-101225-6-7	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.33	mg/L	
	** Total Chlorine	1.50	mg/L	
	** Turbidity	0.08	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Customer Information*
Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled**: 10/12/2025

Sample Description**/UID	Analysis	Results	Units	
Dist Lasalle - 110 Fourth Ave B1-101225-6-8	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.30	mg/L	
	** Total Chlorine	1.48	mg/L	
	** Turbidity	0.08	NTU	
Dist @ Oakbluff Reservoir Out 86 PTH3 B1-101225-6-9	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.52	mg/L	
	** Total Chlorine	1.61	mg/L	
	** Turbidity	0.08	NTU	
Dist Oakbluff - 34 PTH 3 B1-101225-6-10	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.52	mg/L	
	** Total Chlorine	1.76	mg/L	
	** Turbidity	0.10	NTU	
Dist @ Starbuck Reservoir Out 7036 Rd. 54NE B1-101225-6-11	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.55	mg/L	
	** Total Chlorine	1.60	mg/L	
	** Turbidity	0.11	NTU	
Dist Starbuck - 151 Railway B1-101225-6-12	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.24	mg/L	
	** Total Chlorine	1.44	mg/L	
	** Turbidity	0.10	NTU	
Dist @ McGillivray Reservoir Out 54008 Rd. 9E B1-101225-6-13	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.58	mg/L	
	** Total Chlorine	1.72	mg/L	
	** Turbidity	0.11	NTU	
Dist McGillivray - 34 South Landing B1-101225-6-14	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.58	mg/L	
	** Total Chlorine	1.72	mg/L	
	** Turbidity	0.11	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Customer ID:
Date Received: 22/12/2025
Date Sampled:** 22/12/2025
Test Date: 22/12/2025
Report Date: 23/12/2025

Test Package: B1P
Project:

Sample Description**/UID	Analysis	Results	Units	
Raw B1-221225-6-1	Total Coliforms	16	MPN/100 mls	UnAcceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	N/A	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	2.86	NTU	
Treated Res Out B1-221225-6-2	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.47	mg/L	
	** Total Chlorine	N/A	mg/L	
	** Turbidity	0.062	NTU	
Dist - Sanford 58 PR247E B1-221225-6-3	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.37	mg/L	
	** Total Chlorine	1.48	mg/L	
	** Turbidity	0.10	NTU	
Dist - Brunkild Hwy 3 PR332 B1-221225-6-4	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.31	mg/L	
	** Total Chlorine	1.52	mg/L	
	** Turbidity	0.09	NTU	
Dist - Domain 40 088 Rd 4E B1-221225-6-5	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.05	mg/L	
	** Total Chlorine	1.16	mg/L	
	** Turbidity	0.10	NTU	
Dist - Reservoir In @ La Salle B1-221225-6-6	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.44	mg/L	
	** Total Chlorine	1.54	mg/L	
	** Turbidity	0.09	NTU	
Dist - @LaSalle Reservoir Out 92 PR247E B1-221225-6-7	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.46	mg/L	
	** Total Chlorine	1.63	mg/L	
	** Turbidity	0.07	NTU	

HORIZON LAB

Certificate of Analysis
Water Samples

Customer Information*
Macdonald Regional PWS 125.50
Box 100
Sanford, Manitoba
R0G 2J0

Date Sampled**: 22/12/2025

Sample Description**/UID	Analysis	Results	Units	
Dist - LaSalle 51 133 Rd 10E B1-221225-6-8	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	0.32	mg/L	
	** Total Chlorine	0.39	mg/L	
	** Turbidity	0.07	NTU	
Dist - @Oakbluff Reservoir Out 86 PTH3 B1-221225-6-9	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.48	mg/L	
	** Total Chlorine	1.58	mg/L	
	** Turbidity	0.10	NTU	
Dist - Oakbluff 130 Agri Park Rd B1-221225-6-10	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.00	mg/L	
	** Total Chlorine	1.09	mg/L	
	** Turbidity	0.06	NTU	
Dist - @Starbuck Reservoir Out 7036 Rd. 54NE B1-221225-6-11	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.51	mg/L	
	** Total Chlorine	1.68	mg/L	
	** Turbidity	0.08	NTU	
Dist - Starbuck 21 Main St. B1-221225-6-12	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.20	mg/L	
	** Total Chlorine	1.37	mg/L	
	** Turbidity	0.09	NTU	
Dist - @McGillivray Reservoir Out 54008 Rd. 9E B1-221225-6-13	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.34	mg/L	
	** Total Chlorine	1.39	mg/L	
	** Turbidity	0.09	NTU	
Dist - McGillivray 171 Samborski Dr B1-221225-6-14	Total Coliforms	0	MPN/100 mls	Acceptable [1]
	E. coli	0	MPN/100 mls	Acceptable [1]
	** Free Chlorine	1.39	mg/L	
	** Total Chlorine	1.57	mg/L	
	** Turbidity	0.11	NTU	

Appendix C

2025 Trihalomethane (THM) Results

Date	Sample Location	Total THM (mg/L)	Lab
February 19, 2025	La Salle	0.1070	ALS
	Brunkild	0.1130	
May 12, 2025	La Salle	0.0539	ALS
	Brunkild	0.0347	
August 6, 2025	La Salle	0.0636	ALS
	Brunkild	0.0444	
November 24, 2025	La Salle	0.0464	ALS
	Brunkild	0.0491	

2025 Haloacetic Acid (HAA) Results

Date	Sample Location	Total HAA (ug/L)	Lab
February 19, 2025	Oak Bluff	62.30	ALS
	Starbuck	76.8	
May 12, 2025	Oak Bluff	13.20	ALS
	Starbuck	14.90	
August 6, 2025	Oak Bluff	26.40	ALS
	Starbuck	27.50	
November 24, 2025	Oak Bluff	45.10	ALS
	Starbuck	39.80	

Appendix D

2025 General Chemistry Results

Sample Date:	06-Aug-25
Laboratory:	ALS Environmental

Federal Guideline for Canadian Drinking Water Quality (Jan, 2023)

Guide Limit #1 : **GCDWQ - Aestheitc Objective / Other Value (Jan 2020)**

Guide Limit #2: **GCDWQ - Maximum Acceptable Concentrations (MACs - Jan 2020)**

Physical Tests					
Parameter	**Unit**	**Guide Limit 1**	**Guide Limit 2**	**Macdonald Raw**	**Macdonald Treated**
Color, True	CU	15	-	31	<5.0
Conductivity	uS/cm	-	-	749	139
Hardness (as CaCO3)	mg/L	-	-	314	33.3
Langelier Index (4 C)	No Unit	-	-	1.52	-1.39
Langelier Index (60 C)	No Unit	-	-	2.22	-0.616
pH	pH units	7.00-10.5	-	9.06	7.79
Total Dissolved Solids	mg/L	500	-	462	84.6
Transmittance, UV(254mm)	%T/cm	-	-	45.6	93.5
Turbidity	NTU	-	-	7.84	<0.10
Anions & Nutrients					
Parameter	**Unit**	**Guide Limit 1**	**Guide Limit 2**	**Macdonald Raw**	**Macdonald Treated**
Alkalinty, Total (as CaCO3)	mg/L	-	-	257	37.3
Ammonia, Total (as N)	mg/L	-	-	0.046	<0.0050
Bicarbonate (HCO3)	mg/L	-	-	81.5	37.3
Bromide (Br)	mg/L	-	-	0.072	0.0065
Carbonate (CO3)	mg/L	-	-	71.4	<1.0
Chloride (Cl)	mg/L	250	-	52	10.7
Fluoride (F)	mg/L	-	1.5	0.241	0.032
Hydroxide (OH)	mg/L	-	-	<1.0	<1.0
Nitrate (as N)	mg/L	-	10	0.0136	0.0117
Nitrite (as N)	mg/L	-	1	0.001	<0.0010
Sulfate (SO4)	mg/L	500	-	88.5	13.7
Organic/ Inorganic Carbon					
Parameter	**Unit**	**Guide Limit 1**	**Guide Limit 2**	**Macdonald Raw**	**Macdonald Treated**
Dissolved Organic Carbon	mg/L	-	-	14.3	1.53
Total Organic Carbon	mg/L	-	-	16.8	1.46

Total Metals						
Parameter	**Unit**	**Guide Limit 1**	**Guide Limit 2**	**Macdonald Raw**	**Macdonald Treated**	**Macdonald Distribution**
Aluminum (Al)	ug/L	100	2900	83.4	3.1	8.5
Antimony (Sb)	ug/L	-	6	0.24	0.028	0.028
Arsenic (As)	ug/L	-	10	8.78	0.88	0.92
Barium (Ba)	ug/L	-	2000	49.6	4.78	4.82
Beryllium (Be)	ug/L	-	-	0.0033	Non Detect	Non Detect
Bismuth (Bi)	ug/L	-	-	0.0009	Non Detect	Non Detect
Boron (B)	ug/L	-	5000	62	52	50
Cadmium (Cd)	ug/L	-	5	0.0034	Non Detect	Non Detect
Calcium (Ca)	ug/L	-	-	62000	6860	6650
Cesium (Cs)	ug/L	-	-	0.014	Non Detect	Non Detect
Chromium (Cr)	ug/L	-	50	0.2	0.15	Non Detect
Cobalt (Co)	ug/L	-	-	0.26	0.017	Non Detect
Copper (Cu)	ug/L	1000	2000	51.1	7.96	8.94
Iron (Fe)	ug/L	300	-	135	1.4	Non Detect
Lead (Pb)	ug/L	-	5	0.097	0.033	0.212
Lithium (Li)	ug/L	-	-	56.5	11.1	10.8
Magnesium(Mg)	ug/L	-	-	38700	3920	3970
Manganese (Mn)	ug/L	20	1200	123	1.58	0.61
Molybdenum (Mo)	ug/L	-	-	1.6	0.156	0.165
Nickel (Ni)	ug/L	-	-	2.75	0.28	0.17
Phosphorus (P)	ug/L	-	-	1100	116	114
Potassium (K)	ug/L	-	-	11700	2030	2120
Rubidium (Rb)	ug/L	-	-	1.37	0.21	0.25
Selenium (Se)	ug/L	-	50	0.195	0.022	0.042
Silicon (Si)	ug/L	-	-	2140	340	350
Silver (Ag)	ug/L	-	-	Non Detect	0.0014	Non Detect
Sodium (Na)	ug/L	200000	-	44000	13900	14900
Strontium (Sr)	ug/L	-	7000	301	31.8	31
Sulfur (S)	ug/L	-	-	32800	4750	5020
Tellurium (Te)	ug/L	-	-	0.042	Non Detect	Non Detect
Thallium (Tl)	ug/L	-	-	0.0015	Non Detect	Non Detect
Throium (Th)	ug/L	-	-	0.017	Non Detect	Non Detect
Tin (Sn)	ug/L	-	-	0.043	0.05	Non Detect
Titanium (Ti)	ug/L	-	-	2.6	Non Detect	Non Detect
Tungsten (W)	ug/L	-	-	Non Detect	Non Detect	Non Detect
Uranium (U)	ug/L	-	20	1.51	0.154	0.188
Vanadium (V)	ug/L	-	-	4.89	0.59	0.66
Zinc (Zn)	ug/L	5000	-	Non Detect	3.3	4.6
Zirconium (Zr)	ug/L	-	-	0.25	Non Detect	Non Detect

Appendix E

Licenses and Permits Issued in 2025