



Wajed Shah

Regional Drinking Water Officer
Office of Drinking Water
Environment and Climate Change
Unit B – 284 Reimer Avenue
Steinbach, MB R5G 0R5

February 12, 2026

Mr. Shah,

Re: 2025 Grunthal Public Water System Report

Please find attached our annual Public Water System Report for the Community of Grunthal.

This report will be posted on our website at www.hanovermb.ca by March 31, 2026 and hard copies were made available from our R.M.'s office at 28 Westland Drive in Mitchell, Manitoba. We notified residents that this report is available through our Facebook page.

If you have any questions or concerns, please contact Barry Broesky.

Sincerely,

A handwritten signature in black ink, appearing to read "Barry Broesky".

Barry Broesky

Manager of Utilities
Phone: 204-371-0484
E-Mail: barry.broesky@hanovermb.ca

Grunthal Public Water System Annual Report

2025

**Rural Municipality of Hanover
March 1, 2026**

Public Water System Annual Report

LUD of Grunthal – 2025

February 12, 2026

Name of Public Water System: Grunthal Public Water System

Name of legal owner: The Rural Municipality of Hanover

Contact: Barry Broesky, Manager of Utilities
Phone: (204) 371-0484
E-Mail: barry.broesky@hanovermb.ca

Website: www.hanovermb.ca

Water Systems Emergency #: (204) 326-4488

Name of Operators: Cliff Derksen, Utility Operator, Class I
Phone: (204) 392-8285
E-Mail: cliff.derksen@hanovermb.ca

Mike Berg, Utility Operator, OIT
Phone: (204) 381-2124
E-Mail: mike.berg@hanovermb.ca

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Introduction

The 2025 Annual Report for the Grunthal Public Water System, summarizes the water utility's ability to produce safe potable water and to meet Provincial regulations.

1. Description of Water System

The Grunthal Water Treatment Plant provides potable drinking water to approximately 2294 residents within the community. Treated water produced at the water plant meets all health and aesthetic objectives as set forth in the Guidelines for *Canadian Drinking Water Quality*.

1.1 Water Supply Source

The Grunthal Water Treatment Plant receives groundwater from one main drilled well as well as a back-up well. Both wells draw from a water source at roughly 80 feet to 90 feet below the ground surface. The main well in use at the time produces water at approximately 7 liters per second and this raw water is pumped to the water treatment plant reservoir. The raw water does contain some iron that it picks up in the rock aquifer but these metals do not pose any health concerns.

1.2 Intake Structures

Not applicable.

1.3 Water Treatment Process

As the raw water enters the water treatment plant it is immediately treated with Chlorine for disinfection along with ClearHIB-5, which is an iron sequestering agent, which keeps any iron particles from settling out of the water causing staining in the piping. Once treated, the water is then stored in a 295.5 m³ reservoir and a 1,195.62 m³ reservoir from where it can then be distributed throughout the watermain system.

1.4 Distribution System

Treated water from the reservoir is pumped through the mains into the distribution system via three 20hp variable drive duty pumps. The duty pumps distribute the water at pressures of around 60psi through 150mm and 200mm watermains throughout the community. The watermains currently consists of either Asbestos Cement (AC) or High Density Poly pipe (HDPE) construction.

1.5 Storage Reservoirs

As indicated above, storage is supplied by a 295.5 m³ and a 1,195.62 m³ reservoirs, that are above ground reservoirs.

1.6 Number of Connections, Population Served and Types of Water Users

There are approximately 632 water connections within the community, with Grunthal Menno Home and Carleton Hatcheries being the largest users to date. Estimated population use is about 2294 people.

1.7 Classification and Certification

The Grunthal Water Treatment Plant is classified as a Class 1 Water Treatment Facility and is currently operated by three utility operators with certification under the Environment Act Water and Wastewater Facility Operators Regulation. (See *Appendix A – Operator Certification*)

In addition the plant is regulated under license number PWS-09-325-03 and complies with The Drinking Water Safety Act.

2. Disinfection System in Use

2.1 Type of Disinfection System Used

The Grunthal Water Treatment Plant disinfects by adding 12% sodium hypochlorite solution to the water via a chlorinator pump.

2.2 Equipment Redundancy and Monitoring Requirements

As required by the *Drinking Water Safety Act*, the Grunthal Public Water System ensures continuous disinfection as maintained at the plant by keeping stock of all spare parts required for the chlorinator. In addition, a complete spare chlorinator is kept at the plant.

Disinfectant residuals are monitored daily at the water treatment plant and periodically in the distribution system and recorded on the appropriate monitoring forms. Monthly chlorination report forms are sent to the regional Drinking Water Officer at the end of each month.

2.3 Disinfectant Residual Overall Performance Results

For 2025, the Grunthal Public Water System was compliant in the audited time period. 100 % of the Free chlorine residual measurements taken at the Grunthal WTP passed and were above the limit of 0.50 mg/L

3. List of Water Quality Standards

The Province of Manitoba has adopted a number of water quality standards from the *Guidelines for Canadian Drinking Water Quality*, developed by Health Canada. The parameters are health-based and they express the maximum acceptable concentration for a groundwater supply source. Concentration values in excess constitute a health-related issue and require corrective actions. The 2023 results for the Grunthal Public Water System are summarized in the following table.

SOURCE	PARAMETER	STANDARD	FREQUENCY	TEST RESULTS
GROUND WATER	TC & EC*	No TC of EC	Bi-Weekly	100%
	Disinfectant	WTP (>0.5 mg/l)	Daily	100%
		Distribution (0.1 mg/l)	Bi-Weekly	100%
	Lead	0.005 mg/l	As per instructions of the Drinking Water Officer	>0.050 µg/l Raw 0.070 µg/l Treated
	Arsenic	0.01 mg/l	One Raw and One Treated water sample once every three years	0.36 µg/l Raw 0.40 µg/l Treated
	Benzene	.005 mg/l		>.00050 mg/l Raw
	Fluoride	1.5 mg/l		.180mg/l Raw .169 mg/l Treated
	Nitrate	As Nitrate: 45 mg/l		>0.0010 mg/L
		As Nitrogen: 10 mg/l		.0839mg/l Raw .0956mg/L Treated
	Trichloroethylene	0.005 mg/l		<0.00050 mg/L
	Tetrachloroethylene	0.01 mg/l		≤0.00050 mg/L
	Uranium	0.02 mg/l		0.737 µg/L Raw 0.793 µg/L Treated
	Ethylbenzene	<0.00050 mg/l		<0.00050 mg/L
	Manganese	20 - 120 µg/L		44.8 µg/L
	Nitrite	1 mg/L	<0.0010 mg/L	
Toluene	0.06 mg/L	<0.00050 mg/L		
Total Xylenes	0.09 mg/L	<0.00050 mg/L		

**Bacterial Testing: We test the raw water (untreated well water, the treated water leaving the treatment facility and the water in the distribution system within the Town of Grunthal, every two weeks (bi-weekly) for the presence of Total Coliform (TC) and E. Coli (EC) bacteria. If these bacteria are present in the water, it is an indication that disease-causing organisms may also be present.*

4. Water System Failures and Corrective Actions in 2025

No failure to report

5. Additional Records Required

None

6. Drinking Water Safety Order on your System and Actions Taken in Response

None

7. Warnings Issues or Charges Laid on the System in Accordance with the Drinking Water Safety Act

None

8. Major Expenses Incurred in 2025

- 1) Well Maintenance - \$11,130.00
- 2) 2 Hydrant Repairs - \$18,605.75
- 3) 3 Valve Repairs - \$19,162.26

9. Future System Expansion and/or Increased Population

In 2025, in the new residential development located at the NW corner of the community, there were 19 new lots connected to the water system with one of them being a 12-plex. There is a possibility of another 7 single lots, 6 duplex lots and a multi-dwelling lot connecting this year. There is also the possibility of approximately 45 lots being developed in a development located in the SW corner of the community.

10. Appendix

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- e. Disinfection Reports
- f. Incident Advisory Notification Plan

Appendix A

Operators Certification

Water and Wastewater Facility Operators Certification Program

This is to certify

Barry A. Broesky

has qualified as a

<i>Water Treatment</i>	<i>Class II</i>
<i>Water Distribution</i>	<i>Class II</i>
<i>Wastewater Treatment</i>	<i>Class II</i>
<i>Wastewater Collection</i>	<i>Class II</i>

Operator

in accordance with the Water and Wastewater Facility Operators Regulation under *The Environment Act*.

Dated at Winnipeg, Manitoba **this** 7th **day of** April 2020.

Certificate No.: 2009-312
Expires: 2025 April 7
Operator ID: 00107

S. Kowlen

Director
Manitoba Conservation and Climate

Certificate is the property of Manitoba Conservation and Climate and must be surrendered upon request.

Manitoba 

Water and Wastewater Facility Operators Certification Program

This is to certify

Clifford Derksen

has qualified as a

<i>Water Treatment</i>	<i>Class I</i>
<i>Water Distribution</i>	<i>Class I</i>
<i>Wastewater Treatment</i>	<i>Class I</i>
<i>Wastewater Collection</i>	<i>Class I</i>

Operator

in accordance with the Water and Wastewater Facility Operators Regulation under *The Environment Act*.

Issued at Winnipeg, Manitoba this 15th day of December, 2025.

Certificate No.: 2025-338

Valid from: 2025 December 15 to: 2030 December 15

Operator ID: 04614

This Certificate repeals Certificate: 2025-046



Director

Manitoba Environment and Climate Change

Certificate is the property of Manitoba Environment and Climate Change and must be surrendered upon request.

Manitoba 

Water and Wastewater Facility Operators Certification Program

This is to certify

Mike Berg

has qualified as a

<i>Water Treatment</i>	<i>Operator-In-Training</i>
<i>Water Distribution</i>	<i>Operator-In-Training</i>
<i>Wastewater Treatment</i>	<i>Operator-In-Training</i>
<i>Wastewater Collection</i>	<i>Operator-In-Training</i>
<i>Operator</i>	

in accordance with the Water and Wastewater Facility Operators Regulation under *The Environment Act*.

Issued at Winnipeg, Manitoba **this 2nd day of** February, 2026.

Certificate No.: 2026-018

Valid from: 2026 February 2 to: 2031 February 2

Operator ID: 04797



Director

Manitoba Environment and Climate Change

Appendix B

Testing Summary

2025 Lead Sampling Program

We initiated a lead monitoring program this year in accordance with direction from the Office of Drinking Water. Sampling was conducted at 20 locations throughout the community, and an additional 20 locations will be sampled next year. Please see the spreadsheet below for the results.

2025 Residential Lead Monitoring Results- Grunthal Water System (86.00)					
Sample #	Date	Address	Sampled By	Sample Type	Results
1	2025-07-08	12 Chalmers Bay	Operator	RDT	0.000982
2	2025-07-08	192 Greentree Dr.	Operator	RDT	0.000688
3	2025-07-08	22 Victory Bay	Operator	RDT	0.00291
4	2025-07-08	28 Crystal Bay	Operator	RDT	0.000272
5	2025-07-08	285 Partk St.	Operator	RDT	0.00127
6	2025-07-28	81 Oak Ave.	Operator	RDT	0.00287
7	2025-07-28	59 Park St.	Operator	RDT	0.00144
8	2025-07-30	54 Spruce St.	Operator	RDT	0.000829
9	2025-07-30	60 Park St.	Operator	RDT	0.000495
10	2025-07-30	80 Birch St.	Operator	RDT	0.00121
11	2025-07-30	20 Pine St.	Operator	RDT	0.00833
12	2025-09-03	20 Pine St.	Operator	30 MS	0.000569 (Resample)
13	2025-07-30	230 Ash St.	Operator	RDT	0.000474
14	2025-07-30	10 Friesen Ave.	Operator	RDT	0.000121
15	2025-08-13	21 Glenridge Bay	Operator	RDT	0.000889
16	2025-08-13	163 Park St.	Operator	RDT	0.00123
17	2025-08-13	77 Church Ave.	Operator	RDT	0.00399
18	2025-08-13	55 Abbey Lane	Operator	RDT	0.00148
19	2025-08-13	252 Grenntree Dr.	Operator	RDT	0.000762
20	2025-08-13	14 Greenwood Bay	Operator	RDT	0.000216
21	2025-07-08	64 Birch St.	Operator	RDT	0.00052

Appendix C

Analyses

	WP2320502-001 (1)	WP2320502-002 (1)	WP2320502-003 (1)	WP2320502-004 (1)
Sample				
Sample Type Name	Water/Water	Water/Water	Water/Water	Water/Water
Name	GRUNTHAL 1 - RAW WELL 1	GRUNTHAL 1 - RAW WELL 2 - BACKUP	GRUNTHAL 2 - TREATED	GRUNTHAL 3 - DISTRIBUTION MID-POINT 5-30 BIRCH STREET
Sampling Date	22-08-2023	22-08-2023	22-08-2023	22-08-2023
ALS ID	WP2320502-001	WP2320502-002	WP2320502-003	WP2320502-004
Anions and Nutrients				
Ammonia, total (as N) mg/L	0.667	0.304	0.025	
Bromide mg/L	<0.050	0.120	<0.050	
Chloride mg/L	19.9	42.1	27.2	
Fluoride mg/L	0.180	0.094	0.169	
Nitrate (as N) mg/L	0.0839	<0.0050	0.0956	
Nitrite (as N) mg/L	<0.0010	<0.0010	<0.0010	
Sulfate (as SO4) mg/L	45.3	35.3	45.3	
Ion Balance				
Anion sum meq/L	8.79	8.08	8.98	
Cation sum (total) meq/L	9.16	8.31	9.32	
Ion balance (APHA) %	2.06	1.40	1.86	
Ion balance (cations/anions) %	104	103	104	
Organic / Inorganic Carbon				
Carbon, dissolved organic [DOC] mg/L	2.92	1.84	3.09	
Carbon, total organic [TOC] mg/L	2.52	2.00	2.43	
Physical Tests				
Absorbance, UV (@ 254nm) AU/cm	0.0460	0.0280	0.0380	
Alkalinity, bicarbonate (as CaCO3) mg/L	364	308	363	
Alkalinity, carbonate (as CaCO3) mg/L	<1.0	<1.0	<1.0	
Alkalinity, hydroxide (as CaCO3) mg/L	<1.0	<1.0	<1.0	
Alkalinity, total (as CaCO3) mg/L	364	308	363	
Colour, true CU	<5.0	<5.0	<5.0	
Conductivity µS/cm	770	728	788	
Hardness (as CaCO3), from total Ca/Mg mg/L	400	382	398	
Langelier index (@ 4°C) -	0.731	0.643	0.800	
Langelier index (@ 60°C) -	1.49	1.40	1.56	
pH pH units	7.91	7.92	7.99	
pH, saturation (@ 4°C) pH units	7.18	7.28	7.19	
pH, saturation (@ 60°C) pH units	6.42	6.52	6.43	
Solids, total dissolved [TDS] mg/L	457	446	472	
Transmittance, UV (@ 254nm) % T/cm	89.9	93.8	91.6	
Turbidity NTU	3.96	17.6	1.48	
Total Metals				
Aluminum, total µg/L	<3.0	<3.0	<3.0	<3.0
Antimony, total µg/L	<0.10	<0.10	<0.10	<0.10
Arsenic, total µg/L	0.36	0.22	0.40	0.37
Barium, total µg/L	382	229	376	363
Beryllium, total µg/L	<0.020	<0.020	<0.020	<0.020
Bismuth, total µg/L	<0.050	<0.050	<0.050	<0.050
Boron, total µg/L	78	36	82	83
Cadmium, total µg/L	<0.0050	<0.0050	<0.0050	<0.0050
Calcium, total µg/L	93600	87700	92300	91500
Cesium, total µg/L	<0.010	<0.010	<0.010	<0.010
Chromium, total µg/L	<0.50	<0.50	<0.50	<0.50
Cobalt, total µg/L	0.22	<0.10	0.21	0.16
Copper, total µg/L	<0.50	0.84	4.24	6.48
Iron, total µg/L	495	1480	370	223
Lead, total µg/L	<0.050	<0.050	0.070	0.124
Lithium, total µg/L	17.8	11.7	17.2	17.6
Magnesium, total µg/L	40500	39600	40600	39900
Manganese, total µg/L	67.8	83.3	44.8	35.9
Molybdenum, total µg/L	0.742	0.879	0.739	0.750
Nickel, total µg/L	<0.50	<0.50	<0.50	<0.50
Phosphorus, total µg/L	66	71	693	629
Potassium, total µg/L	4380	3020	4250	4190
Rubidium, total µg/L	2.07	1.56	2.02	1.88
Selenium, total µg/L	0.129	0.134	0.118	0.108
Silicon, total µg/L	9730	10300	9520	9360
Silver, total µg/L	<0.010	<0.010	<0.010	<0.010
Sodium, total µg/L	22500	12000	28700	28100
Strontium, total µg/L	571	269	554	556
Sulfur, total µg/L	16800	12500	16500	16700
Tellurium, total µg/L	<0.20	0.35	<0.20	<0.20
Thallium, total µg/L	<0.010	<0.010	<0.010	<0.010
Thorium, total µg/L	<0.10	<0.10	<0.10	<0.10
Tin, total µg/L	<0.10	<0.10	<0.10	<0.10
Titanium, total µg/L	<0.30	<0.30	<0.30	<0.30
Tungsten, total µg/L	<0.10	<0.10	<0.10	<0.10
Uranium, total µg/L	0.737	0.023	0.793	0.765
Vanadium, total µg/L	<0.50	<0.50	<0.50	<0.50
Zinc, total µg/L	<3.0	<3.0	<3.0	4.0
Zirconium, total µg/L	<0.20	<0.20	<0.20	<0.20
Volatile Organic Compounds				
Benzene mg/L	<0.00050	<0.00050		
Bromodichloromethane mg/L	<0.00050	<0.00050		
Bromoform mg/L	<0.00050	<0.00050		
BTEX, total mg/L	<0.0010	<0.0010		
Chloroform mg/L	<0.00050	<0.00050		
Dibromochloromethane mg/L	<0.00050	<0.00050		
Dichloromethane mg/L	<0.0010	<0.0010		
Ethylbenzene mg/L	<0.00050	<0.00050		
Methyl-tert-butyl ether [MTBE] mg/L	<0.00050	<0.00050		
Tetrachloroethylene mg/L	<0.00050	<0.00050		
Toluene mg/L	<0.00050	<0.00050		

Trichloroethane, 1,1,1- mg/L	<0.00050	<0.00050		
Trichloroethane, 1,1,2- mg/L	<0.00050	<0.00050		
Trichloroethylene mg/L	<0.00050	<0.00050		
Xylene, m+p- mg/L	<0.00040	<0.00040		
Xylene, o- mg/L	<0.00030	<0.00030		
Xylenes, total mg/L	<0.00050	<0.00050		
Volatile Organic Compounds Surrogates				
Bromofluorobenzene, 4- µg/L	8.8	9.1		
Difluorobenzene, 1,4- µg/L	10.2	10.4		

Appendix D

Operating License for Public Water System

**OPERATING LICENCE FOR
A PUBLIC WATER SYSTEM**

LICENCE NUMBER: PWS-09-325-03

**THE DRINKING WATER SAFETY ACT
CHAPTER D101, C.C.S.M.**

WATER SYSTEM CODE: 86.00
OPERATION ID: 6700
EFFECTIVE DATE: JUNE 1, 2023
EXPIRY DATE: MAY 31, 2028

IN ACCORDANCE WITH THE DRINKING WATER SAFETY ACT, THIS OPERATING LICENCE IS ISSUED PURSUANT TO SUBSECTION 8(1) TO:

RURAL MUNICIPALITY OF HANOVER: "THE LICENSEE"

FOR THE OPERATION OF THE **GRUNTHAL PUBLIC WATER SYSTEM**, WHICH INCLUDES SECURE WELLS, TREATMENT FACILITIES, WATER STORAGE RESERVOIRS, AND DISTRIBUTION LINES, SUBJECT TO THE ATTACHED TERMS AND CONDITIONS.

THIS LICENCE DOES NOT AFFECT THE LICENSEE'S OBLIGATIONS WITH RESPECT TO COMPLIANCE WITH ALL APPLICABLE MUNICIPAL, PROVINCIAL, AND FEDERAL LEGISLATION. THIS LICENCE SUPERSEDES ALL PREVIOUS LICENCES FOR THIS PUBLIC WATER SYSTEM.

DATE: September 19, 2023


Digitally signed
by Sacha Janzen
Date: 2023.09.19
09:43:59 -05'00'

Sacha Janzen
A/Director, Office of Drinking Water

TERMS AND CONDITIONS

1. GENERAL

- 1.1. The Licensee shall operate the public water system in accordance with all applicable requirements of The Drinking Water Safety Act and its regulations, and the requirements of this licence. In the event that specific terms and conditions of this licence imposed under the authority of subsection 8(3) of the Act exceed the general requirements of the Act and regulations, the specific requirements of this licence shall apply.
- 1.2. The Licensee shall obtain approval from the Office of Drinking Water prior to making any significant alterations to the water source, the water treatment process, the water storage facilities, or the water distribution system.
- 1.3. This licence may be amended by the director where, in the opinion of the director, an amendment is necessary and the amendment will not negatively impact the safety of water obtained from the water system, or effective environmental management.
- 1.4. The Licensee may request an amendment to this licence by submitting an amendment application to the Office of Drinking Water.
- 1.5. This licence may be suspended or cancelled by the director for any of the reasons identified in Section 11 of Manitoba Regulation 40/2007, Drinking Water Safety Regulation or due to a failure to comply with any term or condition of this licence.
- 1.6. The Licensee shall provide written notice to the Office of Drinking Water of any change in ownership of the water system within seven days of the transfer of ownership.
- 1.7. The Licensee shall provide written notice to the Office of Drinking Water of any changes in the operational status of the water system, such as a permanent cessation of service, or changing the length of service from year-round to seasonal or the opposite.
- 1.8. The director of the Office of Drinking Water, medical officer of health or drinking water officer may enter any water system facility as necessary to carry out the provisions of The Drinking Water Safety Act and its regulations.
- 1.9. The Licensee shall post a copy of the first page of this licence at the water treatment facility.
- 1.10. The Licensee shall keep a copy of this licence in its entirety at a location established by the drinking water officer and ensure all operators are familiar with its terms and conditions.
- 1.11. The Licensee shall apply for renewal of this licence at least 60 days prior to its expiry.

2. OPERATION - GENERAL

- 2.1. The Licensee shall operate all water system facilities, control systems, equipment, any reservoirs/cisterns and/or distribution lines as efficiently as possible, inspect them on a regular basis, maintain them in good working order, and ensure that the water system is protected from the risks associated with contamination.
- 2.2. The Licensee shall ensure that all chemicals and components that may come into contact with potable water are certified safe for potable water use through AWWA Standards, ANSI/NSF Standard 60 or 61, Health Canada, or other standards acceptable to the director.
- 2.3. No alternate water source shall be brought into service without the consent of the drinking water officer and the maintenance of adequate cross connection control between the alternate source and the primary source.
- 2.4. The Licensee shall follow the requirements as specified in *Operational Guideline ODW-OG-02 Seasonal Water Systems Start-up Shut-down Procedures* for any portion(s) of the distribution system that operate on a seasonal basis.
- 2.5. The Licensee shall have re-assessments of the water system infrastructure and water supply sources completed by a qualified person, who is not an employee of the water system, in accordance with assessment checklist GW by March 1, 2025, and every five years thereafter. The Licensee may instead have the assessment completed by a qualified professional engineer, who is not an employee of the water system, in accordance with terms of reference for engineering assessments.
- 2.6. The Licensee shall, upon request from the Office of Drinking Water, submit or re-submit a compliance plan, in a form satisfactory to the director, to address any non-compliance issues identified at the time.

3. OPERATION – EMERGENCIES

- 3.1. The Licensee shall ensure that disinfection is undertaken following construction, repair or maintenance activities on the water system, in accordance with applicable AWWA standards, or Manitoba Water Services Board specifications, or any other standards approved by the director. A copy of all associated test results must be kept available for review by the Office of Drinking Water for a minimum of 24 months.
- 3.2. The Licensee shall ensure that all equipment used for disinfection is maintained in effective working order and keep available for immediate use all spare parts and chemical supplies as may be necessary to ensure continuous disinfection, including a spare disinfection unit, if necessary.
- 3.3. The Licensee shall immediately notify the Office of Drinking Water of any condition that may affect the ability of the water system to produce or deliver safe drinking water including but not limited to treatment upsets or bypass conditions, contamination of the source water or treated water, a disinfection system failure, or a distribution system failure.
- 3.4. If a medical officer of health, the director of the Office of Drinking Water, or a drinking water officer issues a water advisory on the water system, the Licensee shall provide notice of the advisory to all water users in accordance with the advisory notification plan or by a method acceptable to the issuer.

4. WATER QUALITY/TREATMENT STANDARDS

- 4.1. The Licensee shall operate the water system in a manner that achieves the water quality/treatment standards specified in Table 1, as determined through the monitoring requirements specified in Table 2:

Table 1: Water Quality/Treatment Standards

Parameter	Quality Standard
Total coliform	Less than one total coliform bacteria detectable per 100 mL in all treated and distributed water
<i>E. coli</i>	Less than one <i>E. coli</i> bacteria detectable per 100 mL in all treated and distributed water
Chlorine Residual	A free chlorine residual of at least 0.5 mg/L in water entering the distribution system following a minimum contact time of 20 minutes A free chlorine residual of at least 0.1 mg/L at all times at any point in the water distribution system
Arsenic	Less than or equal to 0.01 mg/L
Benzene	Less than or equal to 0.005 mg/L
Ethylbenzene	Less than or equal to 0.14 mg/L
Fluoride	Less than or equal to 1.5 mg/L
Lead	Less than or equal to 0.005 mg/L based on a sample(s) collected at a cold water tap or other appropriate location where water may be used for drinking or food preparation
Manganese	Less than or equal to 0.12 mg/L
Nitrate	Less than or equal to 45 mg/L measured as nitrate (10 mg/L measured as nitrogen)
Nitrite	Less than or equal to 3 mg/L measured as nitrite (1 mg/L measured as nitrogen)
Trichloroethylene	Less than or equal to 0.005 mg/L
Tetrachloroethylene	Less than or equal to 0.01 mg/L
Toluene	Less than or equal to 0.06 mg/L
Total Xylenes	Less than or equal to 0.09 mg/L
Uranium	Less than or equal to 0.02 mg/L

- 4.2. If a bacteriological standard is not met, the Licensee shall immediately undertake the applicable corrective actions as listed in "Schedule A" of Manitoba Regulation 41/2007, Drinking Water Quality Standards Regulation.
- 4.3. If a microbial, chemical, radiological, or physical standard is not met, the Licensee shall immediately undertake the applicable corrective actions specified in "Schedule C" of Manitoba Regulation 41/2007, the Drinking Water Quality Standards Regulation.
- 4.4. The Licensee shall maintain in effective working order chlorination and treated water storage equipment and controls designed to achieve a minimum of 20 minutes of chlorine contact time prior to water entering the distribution system.

5. WATER QUALITY MONITORING

5.1. The Licensee shall ensure monitoring is completed as set out in Table 2.

Table 2: Monitoring Schedule

Parameter	Monitoring Requirement
Bacteriological (total coliform and <i>E. coli</i>)	Biweekly sampling program with each set of samples consisting of one raw, one treated, and a minimum of one distribution sample Consecutive sample sets to be separated by at least 12 days
Free Chlorine (treated water)	One sample per day of water entering the distribution system following at least 20 minutes of contact time
Free Chlorine (distribution system)	At the same times and location(s) as bacteriological distribution system sampling
Total Chlorine (treated water)	One sample per day of water entering the distribution system following at least 20 minutes of contact time
Total Chlorine (distribution system)	At the same times and location(s) as bacteriological distribution system sampling
General Chemistry (parameter list provided by Office of Drinking Water)	One raw and one treated water sample once every three years
Total Metals (distribution system)	One sample taken at the same time(s) as general chemistry sampling at a mid-point in the distribution system
Lead	As per the instructions of the drinking water officer
Manganese	Monitoring included in the general chemistry and total metals analysis
Other Parameters	As per the instructions of the drinking water officer

5.2. The Licensee shall ensure that an accredited laboratory, as specified in section 35 of Manitoba Regulation 40/2007 the Drinking Water Safety Regulation, undertake the following analysis required in Table 2:

- a) bacteriological (total coliform and *E. coli*)
- b) general chemistry
- c) manganese
- d) total metals
- e) any other parameter required by the drinking water officer

and that all samples are collected, handled, and submitted in a manner that is satisfactory to the accredited laboratory.

5.3. The Licensee shall ensure that parameters listed in Table 2 but not specified in clause 5.2 are measured utilizing certified water quality monitoring equipment and methods approved by the latest edition of *Standard Methods for the Examination of Water and Wastewater* published jointly by the American Public Health Association, the American Water Works Association and the Water Environment Federation.

5.4. The Licensee shall ensure that raw water samples are taken on an alternating basis in instances where more than one water supply source is used.

5.5. The Licensee shall ensure that all water quality monitoring equipment is properly maintained and calibrated by a qualified person according to manufacturer recommendations and that records are maintained to that effect.

- 5.6. The Licensee shall ensure that sampling within the distribution system takes place at varied locations acceptable to the drinking water officer.

6. RECORD-KEEPING AND REPORTING

- 6.1. The Licensee shall maintain in a secure location all construction drawings for the life of the water system components.
- 6.2. The Licensee shall retain in chronological order for a minimum of 24 months all information specified in subsection 34(2) of Manitoba Regulation 40/2007, Drinking Water Safety Regulation.
- 6.3. The Licensee shall ensure the information identified in clause 6.2 is available for inspection by any member of the public during normal business hours at the office of the water supplier or at a location convenient to the users of the system.
- 6.4. The Licensee shall record disinfectant residual measurements on the monthly disinfection report or other forms satisfactory to the director.
- 6.5. The Licensee shall keep one copy of all monthly report forms required in this licence, and forward the original copy to the drinking water officer within seven days after the end of each calendar month.
- 6.6. The Licensee shall record all distribution system measurements specified in *Table 2: Monitoring Schedule* on the chain of custody form (laboratory submission form) which accompanies the bacteriological sample bottles to the laboratory.
- 6.7. The Licensee shall ensure that water metering devices at the water treatment plant or storage reservoir are maintained in good working order and that flow meter readings are recorded on a daily basis and such records are made available for inspection by a drinking water officer.
- 6.8. The Licensee shall submit an annual report to the director by March 31st of each year on the operation of the water system in the immediately preceding calendar year. The report shall include the information as set out in subsection 32(2) of Manitoba Regulation 40/2007, Drinking Water Safety Regulation.
- 6.9. The Licensee shall inform the public, in a form satisfactory to the director, when an annual report has been prepared and identify how a free copy can be obtained.
- 6.10. The Licensee shall make a copy of each annual report available to the public at no charge on an internet website within two weeks of the issuance of the report, unless otherwise approved by the director. The annual report shall remain available to the public for at least one year.
- 6.11. The Licensee shall maintain and submit an advisory notification plan to the drinking water officer by May 1st of each year. The plan must include a detailed description of communication tools and methods to be used to notify the public of a drinking water emergency, considering key contacts, fan-outs, critical customers, susceptible or difficult-to-reach sub-groups, and template notices where applicable.

Appendix E

Disinfection Reports

Monthly Chlorination Report

Water System Name: GRONTHAL Water System Code: 86.0

Month: JANUARY Year: 2025 Type of Measurement Device: ELECTRONIC

Operator-in-charge (Print): Barry Broesky Other Operators (Print): RUB FRICKEN

Daily Consumption Units: m³ STEPH DOVAL

Flow Meter for Daily Consumption: (circle choice) Raw Treated No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	10:00	R.F.	0.82	0.99	453
2	8:30	R.F.	0.83	0.99	409
3	8:00	R.F.	0.90	1.17	427
4	7:30	B.B.	0.89	1.15	434
5	10:30	B.B.	0.77	1.04	492
6	7:30	R.F.	0.87	1.05	369
7	7:30	R.R.	0.84	1.27	436
8	7:30	R.R.	0.86	1.24	432
9	7:30	R.F.	0.83	1.20	454
10	7:30	R.F.	0.93	1.27	441
11	9:30	R.F.	0.90	1.24	465
12	12:30	R.F.	0.90	1.24	505
13	8:00	B.B.	0.90	1.23	339
14	7:15	B.B.	0.86	1.23	436
15	7:00	B.B.	0.86	1.24	441
16	7:00	B.B.	0.89	1.26	442

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	7:00	B.B.	0.87	1.27	466
18	6:30	B.B.	0.89	1.27	438 438
19	9:15	B.B.	0.88	1.25	480
20	8:00	R.F.	0.96	1.35	412
21	7:30	R.F.	0.99	1.35	442
22	7:30	R.F.	1.08	1.28	450
23	7:30	R.F.	1.05	1.39	449
24	7:30	R.F.	0.88	1.08	441
25	6:45	B.B.	0.91	1.17	440
26	10:00	B.B.	0.79	1.08	516
27	7:30	B.B.	0.84	1.12	388
28	7:30	B.B.	0.78	1.03	519
29	7:30	B.B.	0.74	1.07	367
30	7:15	B.B.	0.69	1.05	458
31	7:15	B.B.	0.69	1.02	442
Total Monthly Consumption					13,683

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
7	9:00	R.F.	Concession Road	0.86	1.13
21	10:00	R.F.	Concession Road	0.92	1.25

Submitted by (Print): Barry Broesky Signature: [Signature]

Monthly Chlorination Report

Water System Name: GRUNTHAL Water System Code: 860

Month: February Year: 2025 Type of Measurement Device: ELECTRONIC

Operator-in-charge (Print): Barry Broesky Other Operators (Print): Rob Friesen

Daily Consumption Units: m³ STEPH DOWAL

Flow Meter for Daily Consumption: (circle choice) Raw Treated No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	7:00	R.F.	0.76	1.05	530
2	1:15	R.F.	0.88	1.21	499
3	7:15	B.B.	0.84	1.16	300
4	8:00	B.B.	0.74	1.10	468
5	7:15	B.B.	0.75	1.17	437
6	7:15	B.B.	1.15	1.59	486
7	7:45	B.B.	1.39	1.80	472
8	7:00	B.B.	1.18	1.48	429
9	6:30	B.B.	1.11	1.36	429
10	7:00	R.F.	0.99	1.30	422
11	7:30	R.F.	0.85	1.13	464
12	7:00	R.F.	0.68	1.06	441
13	7:00	R.F.	0.84	1.19	461
14	7:30	R.F.	0.55	0.63	435
15	7:00	B.B.	0.51	0.76	416
16	10:15	B.B.	0.71	1.01	492

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	7:45	B.B.	0.86	1.26	341
18	7:15	B.B.	0.84	1.31	440
19	7:15	B.B.	1.01	1.28	568
20	7:15	B.B.	1.02	1.46	364
21	7:15	B.B.	1.14	1.45	424
22	9:00	R.F.	0.96	1.19	457
23	6:30	R.F.	0.98	1.31	364
24	7:00	S.D.	0.80	1.00	428
25	7:15	S.D.	0.80	1.00	454
26	7:00	S.D.	0.70	1.10	433
27	7:15	B.B.	0.82	1.21	460
28	7:00	B.B.	0.76	1.23	421
29					421
30					
31					
Total Monthly Consumption					12,335

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
4	9:15	B.B.	Cottonwood Rd	0.66	1.07
18	9:30	B.B.	Cottonwood Rd.	0.80	1.13

Submitted by (Print): Barry Broesky Signature: 

Monthly Chlorination Report

Water System Name: GRANTHALL Water System Code: 86.0

Month: March Year: 2025 Type of Measurement Device: ELECTRONIC

Operator-in-charge (Print): BARRY BRUESKY Other Operators (Print): ROB FRIGGEN

Daily Consumption Units: m³ CLIFF DERKSEN

Flow Meter for Daily Consumption: (circle choice) Raw Treated No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	7:45	C.D.	0.86	1.24	463
2	6:00	C.D.	1.05	1.25	468
3	7:30	R.F.	0.96	1.31	447
4	7:30	R.F.	0.94	1.21	564
5	7:30	R.F.	0.92	1.26	353
6	7:30	R.F.	0.93	1.30	442
7	7:30	R.F.	1.01	1.36	419
8	7:00	R.F.	0.94	1.35	431
9	1:00	R.F.	0.91	1.20	536
10	7:15	C.D.	0.83	1.14	295
11	7:15	C.D.	0.96	1.13	462
12	7:15	C.D.	0.89	1.11	445
13	7:15	C.D.	0.90	1.08	440
14	7:15	C.D.	0.83	1.02	449
15	7:30	B.B.	0.83	1.06	454
16	12:15	B.B.	0.77	1.00	602

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	7:00	B.B.	0.70	1.07	332
18	6:30	B.B.	0.77	1.09	479
19	7:15	B.B.	0.76	1.12	487
20	7:15	B.B.	0.79	1.12	446
21	7:15	B.B.	0.74	1.14	447
22	6:00	C.D.	0.66	1.09	449
23	6:30	C.D.	0.67	1.01	479
24	7:30	R.F.	0.89	1.17	477
25	7:15	R.F.	0.86	1.09	456
26	7:15	R.F.	0.85	1.16	443
27	7:15	R.P.	0.82	1.15	472
28	7:15	B.F.	0.84	1.16	442
29	6:00	C.D.	0.89	1.38	455
30	6:30	C.D.	1.03	1.17	454
31	7:00	C.D.	0.95	1.18	449
Total Monthly Consumption					14094

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
4	9:45	R.F.	Concession Rd.	0.88	1.20
18	12:30	B.B.	Concession Rd.	0.66	0.97

Submitted by (Print): BARRY BRUESKY Signature: 

PLEASE REFER TO OPERATING LICENCE FOR APPLICABLE TREATMENT STANDARDS AND MONITORING REQUIREMENTS. PLEASE CONTACT YOUR DRINKING WATER OFFICER WITH ANY COMMENTS, QUESTIONS OR CONCERNS.

Monthly Chlorination Report

Water System Name: Greenhal Water System Code: 86.0
 Month: Apr 1 Year: 2025 Type of Measurement Device: Electronic
 Operator-in-charge (Print): Barry Broesky Other Operators (Print): Rob Friesen
 Daily Consumption Units: m³ Clyff Derksen
 Flow Meter for Daily Consumption: (circle choice) Raw Treated No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	7:00	C.D.	0.95	1.09	466
2	7:00	C.D.	0.82	1.01	456
3	7:00	C.D.	0.93	1.05	485
4	7:00	C.D.	1.09	1.36	459
5	6:45	R.F.	1.01	1.26	458
6	12:00	R.F.	0.86	1.11	573
7	7:15	R.B.	0.85	1.11	338
8	7:15	R.B.	0.74	1.10	500
9	7:00	R.B.	0.78	1.16	484
10	7:00	R.B.	0.75	1.11	502
11	7:15	R.B.	0.75	1.11	540
12	6:15	C.D.	0.76	1.07	470
13	6:30	C.D.	0.83	1.04	480
14	7:30	R.F.	0.73	1.08	445
15	7:30	R.F.	0.87	1.10	471
16	7:30	R.F.	0.79	1.07	460

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	7:30	R.F.	0.81	1.07	461
18	7:00	R.B.	0.74	1.00	467
19	7:45	R.B.	0.70	0.99	456
20	9:00	R.B.	0.64	0.99	477
21	7:00	C.D.	0.71	1.02	370
22	7:00	C.D.	0.63	0.71	464
23	7:00	C.D.	0.73	0.98	462
24	7:00	C.D.	0.82	1.04	450
25	7:00	C.D.	1.08	1.13	473
26	9:30	R.F.	0.92	0.99	528
27	7:00	R.F.	0.80	0.94	394
28	7:00	R.B.	0.78	1.08	424
29	7:00	R.B.	0.78	1.06	440
30	7:30	R.B.	0.72	1.07	465
31					
Total Monthly Consumption					13,938

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
1	9:00	C.D.	Cottonwood Rd.	0.80	0.92
15	8:30	R.F.	Cottonwood Rd.	0.73	0.92
29	8:15	R.B.	Cottonwood Rd.	0.60	1.02

Submitted by (Print): BARRY BROESKY Signature: 

Monthly Chlorination Report

Water System Name: CHANDLER Water System Code: 86.0

Month: MAY Year: 2025 Type of Measurement Device: ELECTRONIC

Operator-in-charge (Print): BARRY BROSSELY Other Operators (Print): ROSE FINEEN

Daily Consumption Units: m³ ALICE DEBUSEN

Flow Meter for Daily Consumption: (circle choice) Raw Treated No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	7:15	B.B.	0.72	1.03	441
2	7:00	B.B.	0.70	1.05	463
3	8:00	C.D.	0.73	1.05	491
4	7:30	C.D.	0.64	0.78	474
5	7:30	R.F.	0.85	0.97	567
6	7:30	R.F.	0.80	1.05	595
7	7:30	R.F.	0.84	0.94	598
8	7:30	R.F.	0.8	0.91	684
9	7:30	R.F.	0.83	1.14	585
10	8:30	B.B.	0.72	1.14	599
11	9:00	B.B.	0.69	1.03	530
12	7:30	R.F.	0.82	0.96	572
13	7:00	R.F.	0.77	0.94	632
14	7:00	R.F.	0.66	1.04	796
15	7:00	R.F.	0.77	1.06	649
16	7:30	R.F.	0.80	1.01	509

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	10:00	R.F.	0.82	1.00	482
18	12:15	R.F.	0.77	1.13	516
19	9:00	R.F.	0.79	0.81	347
20	7:15	B.B.	0.70	0.98	495
21	7:00	B.B.	0.70	1.04	479
22	7:00	B.B.	0.69	1.06	654
23	7:30	B.B.	0.80	1.22	875
24	7:00	C.D.	0.64	1.04	567
25	6:00	C.D.	1.00	1.34	563
26	7:30	R.F.	1.43	1.77	662
27	7:30	R.F.	1.15	1.51	685
28	7:30	R.F.	1.22	1.46	605
29	7:30	R.F.	1.15	1.53	658
30	7:30	R.F.	1.19	1.40	685
31	7:00	B.B.	1.03	1.41	696
Total Monthly Consumption					18,172

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
13	10:30	R.F.	Commemorative Drive	0.73	0.90
27	9:45	R.F.	Commemorative Drive	1.04	1.30

Submitted by (Print): BARRY BROSSELY Signature: [Signature]

Monthly Chlorination Report

Water System Name: GRANTHAI Water System Code: 86.0
 Month: JUNE Year: 2025 Type of Measurement Device: ELECTRONIC
 Operator-in-charge (Print): KAREN BREWSTER Other Operators (Print): ROB FRIESEN
 Daily Consumption Units: m³ CLIFF BREWSTER
 Flow Meter for Daily Consumption: (circle choice) Raw Treated No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	10:15	R.B.	0.99	1.46	843
2	7:00	C.D.	0.80	1.21	581 571
3	7:00	C.D.	1.02	1.23	490
4	7:00	C.D.	1.05	1.28	532
5	7:00	C.D.	0.92	1.15	583
6	7:00	C.D.	1.02	1.27	628
7	10:00	R.F.	0.93	1.13	762
8	6:30	R.F.	0.74	1.02	392
9	7:00	R.B.	0.72	1.00	478
10	7:15	R.B.	0.65	0.94	478
11	7:00	R.B.	0.65	0.94	493
12	7:00	R.B.	0.73	1.10	574
13	7:00	R.B.	0.74	1.12	559
14	7:30	C.D.	0.40	1.13	599
15	6:00	C.D.	0.97	1.12	598
16	7:30	R.F.	0.78	1.03	587

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	7:00	R.F.	0.76	1.07	581
18	7:00	R.F.	0.70	1.00	585
19	7:00	R.F.	0.74	0.95	770
20	7:30	R.F.	0.62	0.84	649
21	7:30	R.B.	0.77	1.07	671
22	7:00	R.B.	0.76	1.09	642
23	7:00	C.D.	0.64	0.99	488
24	7:00	C.D.	0.81	0.87	530
25	7:00	C.D.	0.76	0.91	597
26	7:00	C.D.	0.84	0.88	594
27	8:00	C.D.	0.78	0.95	723
28	8:00	R.F.	0.85	0.98	705
29	7:00	R.F.	0.71	0.91	638
30	7:00	R.B.	0.63	0.96	686
31					
Total Monthly Consumption					18,026

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
10	9:00	R.B.	Cottonwood Rd.	0.46	0.85
24	10:30	C.D.	Cottonwood RD.	0.69	0.86

Submitted by (Print): BARBARA BREWSTER Signature: [Signature]

PLEASE REFER TO OPERATING LICENCE FOR APPLICABLE TREATMENT STANDARDS AND MONITORING REQUIREMENTS.
 PLEASE CONTACT YOUR DRINKING WATER OFFICER WITH ANY COMMENTS, QUESTIONS OR CONCERNS.

Monthly Chlorination Report

Water System Name: Grunthal Water System Code: 86.0

Month: July Year: 2025 Type of Measurement Device: Electronic

Operator-in-charge (Print): Rob Friesen Other Operators (Print): Barry Braesky

Daily Consumption Units: _____ C.I.H. Derksen

Flow Meter for Daily Consumption: (circle choice) Raw Treated No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	7:00	C.D.	0.70	0.96	694
2	7:00	B.B.	0.76	1.04	767
3	7:00	B.B.	0.66	0.99	581
4	7:15	B.B.	0.79	1.12	647
5	8:00	C.D.	0.62	0.95	571
6	6:45	C.D.	0.93	1.04	616
7	7:30	R.F.	0.87	1.09	595
8	7:30	R.F.	0.80	1.02	538
9	7:30	R.F.	0.73	0.95	586
10	6:15	R.B.	0.84	1.07	708
11	8:15	R.B.	0.77	1.12	824
12	7:00	R.B.	0.75	1.07	717
13	7:00	R.B.	1.37	1.85	719
14	6:00	C.D.	1.27	1.77	620
15	6:00	C.D.	1.43	1.71	534
16	7:00	C.D.	1.25	1.57	536

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	7:00	C.D.	1.16	1.48	767
18	7:00	C.D.	1.05	1.22	934
19	11:00	R.F.	1.40	1.74	660
20	9:00	R.F.	1.02	1.30	535
21	7:00	B.B.	0.80	1.13	501
22	6:45	B.B.	0.67	0.95	500
23	7:00	B.B.	0.68	1.02	506
24	6:45	B.B.	0.79	1.17	496
25	7:00	B.B.	0.87	1.18	664
26	7:30	C.D.	0.76	1.07	557
27	8:00	C.D.	0.77	1.06	575
28	7:30	R.F.	0.78	1.02	509
29	7:30	R.F.	0.79	0.92	505
30	7:30	R.F.	0.77	1.04	619
31	7:30	R.F.	0.83	1.31	564
Total Monthly Consumption					19,145

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
8	8:30	R.F.	Cottonwood Rd.	0.71	0.96
22	8:45	B.B.	Cottonwood Rd.	0.59	0.90

Submitted by (Print): Rob Friesen

Signature: 

PLEASE REFER TO OPERATING LICENCE FOR APPLICABLE TREATMENT STANDARDS AND MONITORING REQUIREMENTS. PLEASE CONTACT YOUR DRINKING WATER OFFICER WITH ANY COMMENTS, QUESTIONS OR CONCERNS.

Monthly Chlorination Report

Water System Name: Grantham Water System Code: 86.0

Month: August Year: 2025 Type of Measurement Device: Electronic

Operator-in-charge (Print): Rob Frisken Other Operators (Print): C. Cliff Derksen

Daily Consumption Units: m³ Barry Brzesky

Flow Meter for Daily Consumption: (circle choice) Raw Treated No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	7:30	R.F.	0.67	1.04	574
2	7:45	B.B.	0.75	1.13	602
3	8:30	B.B.	0.72	1.07	598
4	8:15	B.B.	0.78	1.15	523
5	7:30	R.F.	0.73	0.99	613
6	7:30	R.F.	0.75	1.02	603
7	7:30	R.F.	0.62	0.87	545
8	7:30	R.F.	0.64	0.87	604
9	10:30	R.F.	0.69	0.95	568
10	7:00	R.F.	0.69	0.98	526
11	7:15	B.B.	0.72	1.09	476
12	7:00	B.B.	1.31	1.77	507
13	7:30	B.B.	0.81	1.18	517
14	6:15	B.B.	0.84	1.16	499
15	7:00	B.B.	0.78	1.13	652
16	7:00	C.D.	0.71	1.04	568

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	5:00	C.D.	0.86	1.01	644
18	7:00	R.F.	0.78	1.01	519
19	7:00	R.F.	0.97	1.39	501
20	8:00	R.F.	1.36	1.76	518
21	8:00	R.F.	0.99	1.40	735
22	7:00	R.F.	0.92	1.35	786
23	10:15	R.F.	0.75	1.08	590
24	9:00	C.D.	0.75	1.00	440
25	7:30	R.F.	0.82	1.05	455
26	7:00	R.F.	0.83	1.09	580
27	7:30	R.F.	0.84	1.38	649
28	7:30	R.F.	0.88	1.203	549
29	7:30	R.F.	0.85	1.09	527
30	10:00	R.F.	0.82	1.04	565
31	11:30	R.F.	0.60	0.97	517
Total Monthly Consumption					17,460

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
5	10:00	R.F.	Cottonwood Rd.	0.57	0.81
19	9:45	R.F.	Cottonwood Rd.	0.90	1.75

Submitted by (Print): Rob Frisken Signature: 

Monthly Chlorination Report

Water System Name: GRUNTHAL Water System Code: 86.0

Month: SEPTEMBER Year: 2025 Type of Measurement Device: ELECTRONIC

Operator-in-charge (Print): BARRY BROENLY Other Operators (Print): ROB FRIESEN

Daily Consumption Units: m³ CLIFF DERKSEN

Flow Meter for Daily Consumption: (circle choice) Raw Treated No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	8:00	R.F.	0.63	0.90	385
2	7:00	B.B.	0.60	0.94	498
3	7:15	B.B.	0.68	1.00	501
4	7:00	B.B.	0.67	0.97	480
5	7:00	B.B.	0.62	0.92	475
6	7:00	C.D.	0.69	1.03	462
7	8:15	C.D.	0.84	1.00	469
8	8:00	B.B.	0.77	1.00	471
9	8:00	B.B.	0.68	1.00	475
10	7:30	R.F.	0.66	0.92	460
11	7:00	R.F.	0.77	1.03	447
12	8:00	R.F.	0.79	1.07	465
13	7:30	B.B.	0.74	1.05	399
14	8:45	B.B.	0.80	1.09	507
15	7:00	C.D.	0.93	1.28	415
16	7:00	C.D.	0.98	1.34	507

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	7:00	C.D.	1.14	1.38	444
18	7:00	C.D.	1.10	1.35	669
19	7:00	C.D.	0.99	1.27	637
20	9:30	R.F.	0.72	1.01	488
21	12:00	R.F.	0.61	0.78	527
22	7:00	C.D.	0.52	0.74	338
23	7:00	B.B.	0.58	0.85	493
24	7:00	B.B.	1.02	1.41	467
25	7:30	B.B.	1.28	1.76	481
26	7:30	B.B.	0.93	1.34	483
27	6:45	C.D.	0.76	1.12	449
28	7:15	C.D.	0.64	0.94	483
29	7:30	R.F.	0.63	0.97	472
30	7:15	B.B.	0.63	0.96	478
31					
Total Monthly Consumption					14,325

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
2	8:45	B.B.	Cottonwood Rd	0.41	0.60
16	8:00	C.D.	Cottonwood RD	0.53	0.93

Submitted by (Print): BARRY BROENLY Signature: 

PLEASE REFER TO OPERATING LICENCE FOR APPLICABLE TREATMENT STANDARDS AND MONITORING REQUIREMENTS. PLEASE CONTACT YOUR DRINKING WATER OFFICER WITH ANY COMMENTS, QUESTIONS OR CONCERNS.

Monthly Chlorination Report

Water System Name: GRUNTHAL Water System Code: 86.0

Month: OCTOBER Year: 2025 Type of Measurement Device: ELECTRONIC

Operator-in-charge (Print): Rob Frisen Other Operators (Print): Cliff Derksen

Daily Consumption Units: m³ Berry Broesky

Flow Meter for Daily Consumption: (circle choice) Raw Treated No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	8:00	R.B.	0.63	0.96	521
2	8:00	R.B.	0.72	1.05	473
3	8:15	R.B.	0.76	1.09	524
4	7:30	R.B.	0.76	1.10	456
5	7:30	R.B.	0.78	1.10	473
6	7:00	C.D.	0.73	1.04	471
7	7:00	C.D.	0.87	1.05	512
8	7:00	C.D.	0.82	1.08	516
9	6:45	C.D.	0.86	1.09	470
10	7:00	C.D.	0.93	1.17	493
11	10:00	R.F.	0.72	0.81	553
12	12:00	R.F.	0.74	0.95	523
13	9:30	R.F.	0.69	0.96	387
14	7:00	R.B.	0.69	0.98	462
15	7:00	R.B.	0.60	0.96	488
16	7:00	R.B.	0.74	1.14	687

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	7:30	R.B.	0.84	1.29	683
18	6:30	C.D.	0.91	1.25	477
19	7:30	C.D.	0.98	1.28	536
20	7:30	R.F.	1.02	1.26	495
21	7:30	R.F.	0.90	1.17	509
22	8:00	R.B.	0.79	1.05	525
23	7:30	R.F.	0.92	1.15	455
24	7:30	R.F.	0.81	1.10	523
25	5:00	C.D.	0.84	1.17	459
26	7:15	C.D.	0.78	1.10	521
27	7:00	C.D.	0.89	1.15	467
28	7:00	C.D.	0.91	1.10	493
29	7:00	C.D.	0.88	1.14	475
30	7:00	C.D.	0.89	1.07	482
31	7:00	C.D.	0.86	1.06	500
Total Monthly Consumption					15,609

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
1	9:15	R.B.	COTTONWOOD RD.	0.50	0.69
14	10:00	R.B.	COTTONWOOD RD.	0.36	0.75
28	9:30	C.D.	COTTONWOOD RD.	0.63	0.97

Submitted by (Print): BARRY BROESKY

Signature: 

PLEASE REFER TO OPERATING LICENCE FOR APPLICABLE TREATMENT STANDARDS AND MONITORING REQUIREMENTS. PLEASE CONTACT YOUR DRINKING WATER OFFICER WITH ANY COMMENTS, QUESTIONS OR CONCERNS.

Monthly Chlorination Report

Water System Name: Grunthal Water System Code: 86.0
 Month: November Year: 2025 Type of Measurement Device: Electronic
 Operator-in-charge (Print): Barry Broesky Other Operators (Print): Cliff Derksen
 Daily Consumption Units: m³
 Flow Meter for Daily Consumption: (circle choice) Raw Treated No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	10:15	R.F.	0.57	0.91	545
2	12:00	R.F.	0.74	1.04	580
3	7:00	B.B.	0.80	1.11	344
4	7:00	C.D.	0.81	1.18	475
5	7:00	C.D.	0.94	1.22	477
6	7:00	C.D.	0.94	1.16	507
7	8:30	B.B.	0.78	1.06	540
8	7:30	B.B.	0.67	1.04	438
9	6:30	B.B.	0.55	0.90	486
10	7:30	R.F.	0.57	0.81	456
11	7:00	B.B.	0.86	1.01	456
12	7:30	R.F.	0.94	1.18	477
13	7:30	R.F.	1.02	1.39	459
14	7:30	R.F.	1.13	1.33	474
15	7:30	B.B.	1.00	1.37	455
16	10:30	B.B.	0.98	1.32	546

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	8:00	R.F.	0.99	1.32	391
18	8:00	R.F.	0.96	1.19	461
19	8:00	R.F.	0.84	1.16	467
20	7:00	R.F.	0.87	1.09	445
21	8:30	R.F.	0.91	1.06	495
22	5:30	C.D.	0.99	1.31	397
23	6:45	C.D.	0.79	1.27	471
24	8:30	B.B.	1.10	1.28	488
25	8:30	B.B.	0.93	1.25	471
26	6:30	B.B.	0.80	1.11	444
27	7:45	B.B.	0.58	0.89	494
28	7:00	B.B.	0.52	0.79	450
29	7:00	B.B.	0.54	0.80	458
30	10:45	B.B.	0.61	0.91	553
31	7:00				
Total Monthly Consumption					14,215

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
11	8:45	B.B.	Cottonwood Rd.		
25	9:30	B.B.	Cottonwood Rd.	0.76	1.08

Submitted by (Print): BARRY BROESKY Signature: 

PLEASE REFER TO OPERATING LICENCE FOR APPLICABLE TREATMENT STANDARDS AND MONITORING REQUIREMENTS.
 PLEASE CONTACT YOUR DRINKING WATER OFFICER WITH ANY COMMENTS, QUESTIONS OR CONCERNS.

Monthly Chlorination Report

Water System Name: Grunthal Water System Code: 86.0
 Month: December Year: 2025 Type of Measurement Device: Electronic
 Operator-in-charge (Print): Barry Broesky Other Operators (Print): Cliff Derksen
 Daily Consumption Units: m³
 Flow Meter for Daily Consumption: (circle choice) Raw Treated / No Metering

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
1	7:00	C.D.	0.74	1.03	351
2	7:00	C.D.	0.82	1.15	512
3	7:00	C.D.	0.80	1.10	468
4	7:00	C.D.	0.79	1.07	499
5	7:00	C.D.	0.97	1.09	502
6	8:30	C.D.	0.86	1.08	493
7	7:00	C.D.	0.87	1.14	443
8	8:30	B.B.	0.86	1.05	503
9	8:30	B.B.	0.76	1.14	479
10	7:30	B.B.	0.79	1.15	462
11	7:00	B.B.	0.79	1.09	439
12	8:00	B.B.	0.76	1.08	506
13	7:00	B.B.	0.76	1.10	455
14	10:30	B.B.	0.71 1.04	1.04	587
15	7:00	C.D.	0.71	1.00	389
16	7:00	C.D.	0.83	1.12	493

Date	Time	Initials	Residuals (mg/L)		Daily Consumption
			Free	Total	
17	7:00	C.D.	0.96	1.19	486
18	6:30	C.D.	0.84	1.09	461
19	6:30	C.D.	0.75	0.89	491
20	6:30	C.D.	0.73	0.90	451
21	7:30	C.D.	0.53	0.79	425
22	7:30	C.D.	0.62	0.87	447
23	6:00	C.D.	0.70	0.97	464
24	6:30	C.D.	0.85	1.02	494
25	7:30	C.D.	0.80	1.17	517
26	9:30	C.D.	0.95	1.25	463
27	8:00	C.D.	0.89	1.11	420
28	7:00	C.D.	0.81	1.01	457
29	6:00	C.D.	0.94	1.18	446
30	6:00	C.D.	0.89	1.05	488
31	6:00	C.D.	0.87	1.08	483
Total Monthly Consumption					14,634

Residuals at Distribution Sample Locations

Date	Time	Initials	Location	Residuals (mg/L)	
				Free	Total
9	9:45	B.B.	Cottonwood Rd.	0.61	0.92
22	9:00	C.D.	Cottonwood RD	0.64	0.88

Submitted by (Print): Cliff Derksen Signature: 

PLEASE REFER TO OPERATING LICENCE FOR APPLICABLE TREATMENT STANDARDS AND MONITORING REQUIREMENTS.
 PLEASE CONTACT YOUR DRINKING WATER OFFICER WITH ANY COMMENTS, QUESTIONS OR CONCERNS.

Appendix F

Incident Advisory Notification Plan



Grunthal Advisory Notification Plan

February 18, 2026

The Grunthal Water system has one water treatment plant which provides water for the town of Grunthal MB.

If there is a water quality issue with the system, please contact our Water and Wastewater Treatment Operators, Cliff Derksen at 204-392-8285, or Mike Berg at 204-381-2124. Our Utilities Manager, Barry Broesky, can also be contacted at 204-371-0484, along with the Regional Drinking Water Officer (DWO) Wajed Shah at 204-408-8807 or 204-346-6346. A voice conversation must be had with a Drinking Water Officer. If you cannot reach anyone at those numbers, call the emergency line at 1-855-944-4888. Using the attached Emergency action chart, the DWO, Operators and Manager will determine the appropriate actions to take to rectify the situation.

Customers in the affected area(s) will be notified by the municipalities Facebook page and website, as well as the electronic community billboards. Critical customers will be notified by phone and paper notice, and in isolated incidents localized canvassing may also be carried out.

28 Westland Drive, Mitchell, Manitoba R5G 2N9 P:204.326.4488 F:204.326.4830 E:general@hanovermb.ca www.hanovermb.ca

28 Westland Drive, Mitchell, Manitoba, R5G 2N9
Phone (204) 326-4488 Fax (204) 326-4830
e-mail: general@hanovermb.ca website: www.hanovermb.ca

EMERGENCY ACTION PLAN

Incident

