2025

Annual Water Report

City of Grand Forks
May 13, 2026

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Introduction

This report fulfills the requirements set forth by the British Columbia Drinking Water Protection Act (DWPA) and the City of Grand Forks Water System Operating Permit. It provides an overview of the treatment and distribution system, along with a summary of projects and operational processes.

The report is submitted to Interior Health and reviewed by Pouria Mojtahedi, Specialist Environmental Health Officer based out of Nelson, BC, who ensures the City's compliance with the DWPA.

Water Distribution System Overview

The City of Grand Forks operates a comprehensive drinking water system comprising of five wells equipped with various pumps, two reservoirs, a booster pump station, and approximately 55 kilometers of water distribution mains. This system supplies water to approximately 1886 residential, commercial and industrial customers within the City.

All drinking water in Grand Forks is sourced from groundwater, pumped from the local aquifer. To maintain water quality throughout the distribution system, calcium hypochlorite is introduced at each well site to disinfect and prevent bacterial contamination.

The City utilizes a Supervisory Control and Data Acquisition System (SCADA) to monitor the water distribution system. This system allows operators to remotely monitor and control various parameters such as chlorine levels, flow rates, reservoir levels, and pump operations. SCADA also generates trend reports and alerts operators via mobile devices in case of anomalies or emergencies.

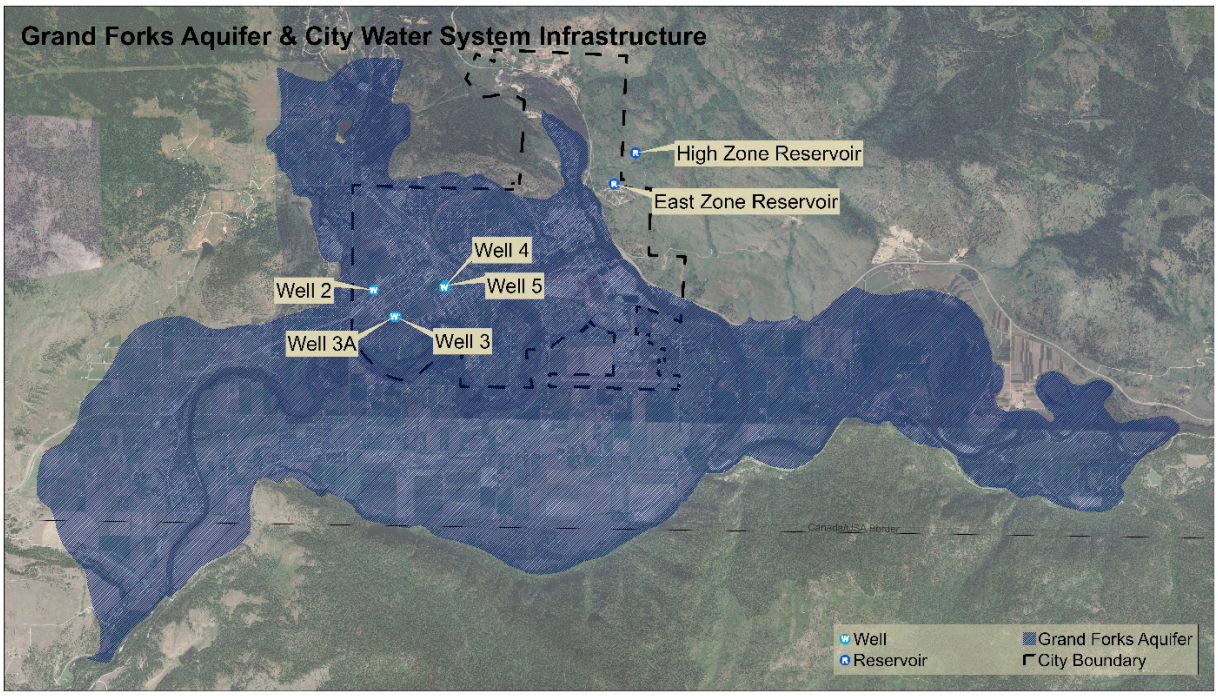

Figure 1: Map of the Grand Forks Aquifer, with the City of Grand Forks Water System Infrastructure.

EOCP Certification

The City's Drinking Water Distribution System is certified by the Environmental Operators Certification Program (EOCP) board as a level III facility and is permitted by Interior Health. The City employs certified operators who are responsible for maintaining and operating the distribution system.

Water Quality Monitoring

In compliance with its Drinking Water System Operating Permit, the City submits monthly reports to Interior Health detailing water quality testing results for parameters such as coliforms, E. coli, and chlorine residuals. The testing includes daily monitoring through SCADA and weekly sampling at various locations throughout the distribution system, as well as comprehensive annual sampling at selected Well sites.

Cross Connection Control

Grand Forks maintains a robust Cross Connection Control Program to prevent the contamination of the City's Water Distribution System. Certified staff and a third-party contractor oversee the program, which includes annual testing of City-owned backflow prevention devices and the monitoring of private systems by independent qualified contractors.

Figure 2: 150mm Meter and Backflow Assembly for an Industrial Service.

Distribution Flushing

Annual water main flushing is conducted to prevent bacterial growth and ensure water quality. This process involves flushing 55 kilometers of water mains using dead end blow-offs and strategically selected fire hydrants, primarily performed in the spring.

Figure 3: Well Pump and Piping to Water Distribution System.

Water Production

In 2025, Grand Forks produced approximately 1.3 million cubic meters of potable water to meet the needs of its customers.

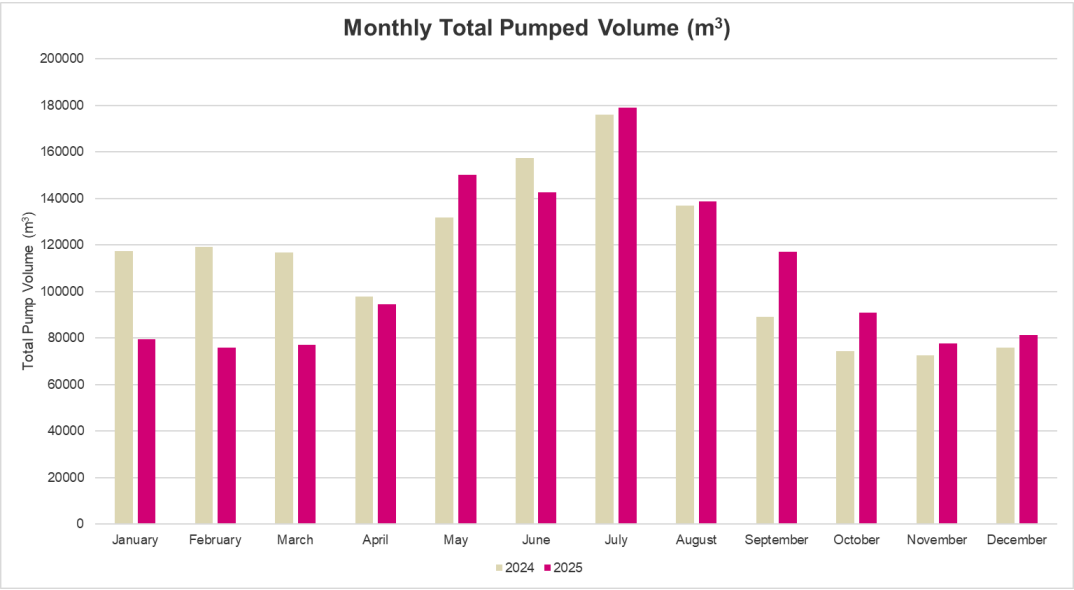

Figure 4: Chart Comparing 2024 & 2025 Total Monthly Pumped Volumes.

Water Conservation

The City promotes water conservation through its water meter program, which collects data for billing across residential, industrial, and public green spaces. Educational efforts are made through local publications, the City website, and utility billing inserts.

Figure 5: Well 1 Building Removal and Aquifer Protection.

Water System Improvements

Distribution System Repairs & Replacements

Various small repairs were completed throughout 2025. Numerous service connections and several sections of water main were repaired.

Water System Improvement Project

In 2025, the City continued the Water System Improvement Project in collaboration with ISL Engineering and Land Services Ltd. This work included the design and preparation for construction of the East Zone Reservoir Replacement, with reservoir construction scheduled for 2026.

Well 3/3A Chlorinator Replacement

Early in the year, the City experienced a PLC failure on the Well 3/3A Chlorinator System. As a result, a new Chlorinator System was ordered, and installation is scheduled for early 2026.

Figure 6: New Chlorinator Assembly for Well 3/3A.

Conclusion

This annual report highlights the City of Grand Forks' commitment to ensuring safe, reliable, and sustainable drinking water for its residents and businesses. Ongoing efforts in monitoring, maintenance, and strategic planning reflect our dedication to meeting regulatory standards and community needs.

Contact For Additional Information

If you have any questions, please contact the City of Grand Forks at info@grandforks.ca or 250-442-8266.

Appendix A:
Annual Comprehensive Water Analysis

CARO ANALYTICAL SERVICES

TEST RESULTS

REPORTED TO	Interior Health Authority - Penticton	**WORK ORDER**	25C0008
PROJECT	Comprehensive 2024 for Ivor Norlin	**REPORTED**	2025-03-05 14:33

Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
680; Well #3 (25C0008-01) | Matrix: Water | Sampled: 2025-02-26 10:45						
Anions						
Chloride	**2.07**	AO ≤ 250	0.10	mg/L	2025-03-01	
Fluoride	**0.31**	MAC = 1.5	0.10	mg/L	2025-03-01	
Nitrate (as N)	**0.171**	MAC = 10	0.010	mg/L	2025-03-01	
Nitrite (as N)	< 0.010	MAC = 1	0.010	mg/L	2025-03-01	
Sulfate	**17.0**	AO ≤ 500	1.0	mg/L	2025-03-01	
Calculated Parameters						
Hardness, Total (as CaCO3)	**133**	None Required	0.500	mg/L	N/A	
Langelier Index	**0.2**	N/A	-5.0		2025-03-05	CT6
Solids, Total Dissolved	**153**	AO ≤ 500	1.00	mg/L	N/A	
General Parameters						
Alkalinity, Total (as CaCO3)	**127**	N/A	1.0	mg/L	2025-03-01	
Alkalinity, Phenolphthalein (as CaCO3)	< 1.0	N/A	1.0	mg/L	2025-03-01	
Alkalinity, Bicarbonate (as CaCO3)	**127**	N/A	1.0	mg/L	2025-03-01	
Alkalinity, Carbonate (as CaCO3)	< 1.0	N/A	1.0	mg/L	2025-03-01	
Alkalinity, Hydroxide (as CaCO3)	< 1.0	N/A	1.0	mg/L	2025-03-01	
Colour, True	< 5.0	AO ≤ 15	5.0	CU	2025-03-01	
Conductivity (EC)	**299**	N/A	2.0	µS/cm	2025-03-01	
Cyanide, Total	< 0.0020	MAC = 0.2	0.0020	mg/L	2025-03-04	
pH	**8.01**	7.0-10.5	0.10	pH units	2025-03-01	HT2
Temperature, at pH	**22.6**	N/A		°C	2025-03-01	HT2
Turbidity	< 0.10	OG < 1	0.10	NTU	2025-03-01	
Total Metals						
Aluminum, total	< 0.0050	OG < 0.1	0.0050	mg/L	2025-03-04	
Antimony, total	< 0.00020	MAC = 0.006	0.00020	mg/L	2025-03-04	
Arsenic, total	**0.00417**	MAC = 0.01	0.00050	mg/L	2025-03-04	
Barium, total	**0.0225**	MAC = 2	0.0050	mg/L	2025-03-04	
Boron, total	< 0.0500	MAC = 5	0.0500	mg/L	2025-03-04	
Cadmium, total	< 0.000010	MAC = 0.007	0.000010	mg/L	2025-03-04	
Calcium, total	**40.0**	None Required	0.20	mg/L	2025-03-04	
Chromium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-03-04	
Cobalt, total	< 0.00010	N/A	0.00010	mg/L	2025-03-04	
Copper, total	< 0.00040	MAC = 2	0.00040	mg/L	2025-03-04	
Iron, total	< 0.010	AO ≤ 0.3	0.010	mg/L	2025-03-04	
Lead, total	< 0.00020	MAC = 0.005	0.00020	mg/L	2025-03-04	
Magnesium, total	**8.12**	None Required	0.010	mg/L	2025-03-04	
Manganese, total	**0.0160**	MAC = 0.12	0.00020	mg/L	2025-03-04	
Mercury, total	< 0.000010	MAC = 0.001	0.000010	mg/L	2025-03-05	
Molybdenum, total	**0.00230**	N/A	0.00010	mg/L	2025-03-04	
Nickel, total	< 0.00040	N/A	0.00040	mg/L	2025-03-04	
Potassium, total	**1.48**	N/A	0.10	mg/L	2025-03-04	
Selenium, total	< 0.00050	MAC = 0.05	0.00050	mg/L	2025-03-04	

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Analyte	Result	Guideline	RL	Units	Analyzed	Qualifier
680; Well #3 (25C0008-01) | Matrix: Water | Sampled: 2025-02-26 10:45, Continued						
Total Metals, Continued						
Sodium, total	**6.02**	AO ≤ 200	0.10	mg/L	2025-03-04	
Strontium, total	**0.389**	MAC = 7	0.0010	mg/L	2025-03-04	
Uranium, total	**0.00213**	MAC = 0.02	0.000020	mg/L	2025-03-04	
Zinc, total	< 0.0040	AO ≤ 5	0.0040	mg/L	2025-03-04	

Sample Qualifiers:

CT6	Results were based on lab temperature & lab pH.
HT2	The 15 minute recommended holding time (from sampling to analysis) has been exceeded - field analysis is recommended.