Town of The Blue Mountains

Water Section Operations Update May 1, 2025 to August 31, 2025

Water and Wastewater Services Division

Town of The Blue Mountains
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Executive Summary

This report provides an overview of the Town's drinking water system operations, activities and water quality results for the reporting period of May 1, 2025 to August 31, 2025.

Ensuring the safety and quality of the Town's drinking water system is a shared responsibility between certified Water Operators and Municipal Council Members. While the Safe Drinking Water Act, 2002 (SDWA) does not require Council to be technical experts, it does impose a statutory standard of care, requiring that they remain informed and exercise diligent oversight of the drinking water system.

In accordance with Ontario Regulation 170/03, water samples were collected following all regulatory requirements for frequency and testing parameters. No adverse water quality issues were identified.

All Operators are trained in compliance with Ontario Regulation 128/04. The majority of training was completed in the first quarter of this year. Staff continue to evaluate training opportunities to ensure they are relevant and applicable to current and future operational needs.

An internal audit of the Town's Drinking Water System was completed during this reporting period as well as the annual Top Management Meeting was conducted, fulfilling a requirement of the Town's Drinking Water Quality Management System (DWQMS).

Several maintenance activities were completed at the Thornbury Water Treatment Plant and throughout the distribution system, including annual Ultraviolet Disinfection System maintenance, high lift pump replacement as well as the annual generator and backflow preventor inspections.

Work on (3) three capital projects was completed during this reporting period. Both the improvements to the Happy Valley Reservoirs and the installation of the chlorine line from the Water Treatment Plant to the intake crib wrapped up. Additionally, the installation of a highlift pump at the Water Treatment Plant was completed.

(1) One watermain break was repaired on Arthur Street West near the Elma Street intersection. (2) two, two-inch holes were found in the cast iron watermain, approximately 18 inches apart. The repair was completed under positive pressure, and an air gap was maintained. The repair was completed same day, with assistance from the Town's Road Department and third-party Contractors to assist with the traffic control and the excavation.

The two-year warranty inspection of the Thornbury Water Tower was completed. Only minor touch-ups were required, and no major deficiencies were noted.

Staff were involved with commissioning projects for the Parkbridge Development as well as several Town Capital Projects such as Thornbury West Phase 1B, Peel Street North and the Substandard Watermain Phase 3 Project.

Introduction

This report provides an overview of the Town's drinking water system activities for the period of May 1, 2025, to August 31, 2025. The Town continues to provide residents and visitors with safe and reliable drinking water, meeting or exceeding all applicable provincial regulatory standards.

The purpose of this report is to inform Council of the system's performance, key activities and any incidents or maintenance events during the reporting period. The information contained in this report supports ongoing compliance with the Safe Drinking Water Act, Ontario Regulation 170/03, Ontario Regulation 128/04, and the Drinking Water Quality Management Standard (DWQMS).

This report will address the following:

- System Information
- Raw, Treated and Distribution Water Quality Data
- Staff Training
- Drinking Water Quality Management Standard Management Review
- Drinking Water Quality Management System Internal Audit
- Water Treatment Plant and Water Booster Station Maintenance Summary
- Distribution System Summary
- Summary of Plant Flows
- Watermain Break Summary
- Incidents of Adverse Water Quality
- Water Quality Concerns / Resident Complaints

System Information

Drinking Water System Number:	220001762
Drinking Water System Name:	The Blue Mountains Drinking Water System
Drinking Water System Owner:	Town of The Blue Mountains
Drinking Water System Category:	Large Municipal Residential
Water Treatment Subsystem Class:	Class 2 Certificate No. 1758
Water Distribution Subsystem Class:	Class 3 Certificate No. 1759
Municipal Drinking Water License:	111-101
Municipal Drinking Water Permit:	111-201

Raw, Treated and Distribution Water Quality Data

Ontario Regulation 170/03 specifies guidelines for the number of samples to be taken, the frequency of sampling and the actions to be taken if any of the sample results indicate adverse water quality.

Schedule 10 of Ontario Regulation 170/03 requires weekly sampling and testing for E. Coli, Total Coliform and Heterotrophic Plate Count (HPC).

Weekly samples are collected for raw and treated water from the WTP and analyzed by an accredited laboratory.

Overviews of the raw and treated sampling data for the period of May 1, 2025, to August 31, 2025 are presented in Tables 1 and 2 respectively.

Table 1 – Raw Water

Parameter	Result Range (Min-Max)	Parameter Limit
E. Coli	0 to 5	N/A
Total Coliform	0 to 19	N/A

Table 2 – Treated Water

Parameter	Result Range (Min-Max)	Parameter Limit
E. Coli	0	0
Total Coliform	0	0
HPC	0 to 1	N/A

Drinking water quality is further monitored throughout the distribution system by a comprehensive sampling and analysis program involving weekly sampling at designated sampling stations as well as reservoirs and booster stations.

An overview of the distribution sampling data for the period of May 1, 2025, to August 31, 2025 is presented in Table 3:

Table 3 – Distribution

Parameter	Number of Samples	Result Range (Min – Max	Parameter Limit
E. Coli	176	0	0 cfu/100 mg/l
Total Coliform	176	0	0 cfu/100 mg/l
HPC	159	0 to 60	N/A

Staff Training

In accordance with Ontario Regulation 128/04, all water treatment and distribution Operators possess operating licenses appropriate to the class of the facility where they are employed. The Town's water distribution system is designated as a Class 3 subsystem, and Operators are therefore required to complete a minimum of:

- 26 hours of on-the-job practical training per year, and
- 14 hours of formal training (Continuing Education Units) per year

The Town places a strong emphasis on continuing education to ensure Operators maintain regulatory compliance and remain up to date with industry practices and emerging technologies.

A summary of the courses attended from May 1, 2025, to August 31, 2025 by Operators is provided in Table 4:

Table 4 – Operator Training

Operator Name	Training Course Completed
Rob Gilchrist	• Ontario's Water Conference and Trade Show 2025

Drinking Water Quality Management Standard Management Review

As part of the Municipal Drinking Water Licensing Program, the Town is required to establish a Drinking Water specific Quality Management System (QMS) based on the requirements set out in the Drinking Water Quality Management Standard (DWQMS).

The Town's Operational Plan, which documents how the Town complies with the PLAN, DO, CHECK, and IMPROVE cycle of the DWQMS, is structured around 21 Elements. Element # 20: Management Review outlines the requirements and procedures for conducting regular reviews of the QMS by Top Management.

As Council holds ultimate responsibility and decision-making authority for the drinking water system – including ensuring that adequate resources and infrastructure are in place – its is essential that the findings of the Management Reviews are communicated to Council.

Element # 20 of the Town's Operational Plan requires that a Management Review of the Town's QMS be conducted every calendar year. These reviews are to be used to evaluate the continuing suitability, adequacy, and effectiveness of the QMS.

On June 4, 2025, a Management Review was conducted with the Town's Interim Chief Administrative Officer, the Director of Operations, the Manager of Water & Wastewater Services, the Water Supervisor, and the Compliance Coordinator.

The review assessed ongoing compliance with legislative and regulatory requirements, system performance, and any outstanding issues from prior reviews.

No new action items were identified and outstanding items outstanding from previous reviews were discussed and considered resolved.

Water Treatment Plant and Water Booster Station Maintenance Summary

Throughout the reporting period, a range of maintenance and operational activities were completed at the Thornbury Water Treatment Plant and Distribution Facilities to ensure the continued safe and efficient operation of the facilities. Work was performed by both Town Staff and third-party contractors, and included routine preventative maintenance, equipment upgrades, and system repairs.

Thornbury Water Treatment Plant

- Third-party Contractor working on raw sample and pre-chlorination line replacement
- Ran standby on new chlorine line to charge and switch over
- Rack # 1 water and air leak repaired
- Rack Enhanced Flux Maintenance (EFM) on all (3) three racks completed monthly
- UV Transmittance signal fault. Trending froze due to lamp failure
- Third-party Contractor performed maintenance on air compressors
- Flush of calcium thiosulphate system completed
- IT updated firewalls
- Annual maintenance of UV system completed by Third-party Contractor
- Third-party Contractor replaced air end on Compressor B
- Annual maintenance of backflow preventors completed by Third-party Contractor
- Replaced screens on air scrub line for all (3) three racks
- Third-party Contractor replaced screen for soft start on High Lift # 2
- Clean in Place (CIP) completed
- Third-party Contractor completed repair of overhead crane
- Annual inspection of the Intake completed by Third-party Contractor
- Third-party Contractor troubleshooting and repairing UV 1 low water level alarm
- High lift # 1 pump replacement
- SCADA Integrator programmed UVT banner to call out on alarm fault

10th Line Booster Station

- SCADA Integrator completed PLC and Truck Fill updates to scaling
- Repair to chlorine pump # 2
- Annual generator maintenance completed by Third-party Contractor
- New tubing from pumps to injector ran
- Chlorine pump preventative maintenance kits completed
- Annual backflow certification completed by Third-party Contractor
- Emptied and cleaned sodium hypochlorite tank

Thornbury Reservoir

- Annual generator maintenance
- Replaced Pump # 1 vent line and fittings
- Troubleshooting for surge relief valve and found issue with differential pilot
- Installed (2) two new style injector valves, quills and check valves
- Third-party Contractor replaced soft start control module on Pump # 3
- Annual backflow preventor inspections completed by Third-party Contractor
- Chlorine fill line between chlorine tanks repaired
- Chlorine leak on Pump # 2 discharge line repaired

Camperdown Reservoir

- Annual generator maintenance completed by Third-party Contractor
- Repaired water leak on fire pump and replaced corroded nipple
- Upper zone Pump # 2 pump fault
- Operating in Camperdown mode due to Tower inspection

Arrowhead Road Booster Station

- Annual generator maintenance completed by Third-party Contractor
- New Emergency light battery installed
- Third-party Contractor installed new P1 hour meter
- Repaired Pump # 1 packing line due to split
- Flow adjusted to chlorine analyzer

Happy Valley Booster Station

- Flush drain line of south cell at Happy Valley Booster Station
- Third-party Contractor replaced breaker and installed plug at north cell
- Flushing and sampling South Cell resulting from repairs to Reservoirs
- Flushing and sampling North Cell resulting from repairs to Reservoirs
- Flush drain line and place North cell back in service

- Chlorine leak repair on chlorine Pump # 1
- Inspection of south cell lid
- New lid and latch installed on South Cell Reservoir
- Repaired chlorine leak on Pump # 2

Mountain Road Booster Station

- (2) Two membranes installed on chlorine analyzers
- Repair chlorine leak on Pump # 2

Swiss Meadows Standpipe

- Third-party Contractor completed inspection on ladder

Capital Project Highlights

Happy Valley Reservoirs – South Cell Rehabilitation

In April 2025, the Town initiated improvements to the south reservoir cell at the Happy Valley Booster Station. The scope of work included:

- Repair of the exposed interior and exterior concrete walls and the roof flab
- Replacement of sealant in the joint between the roof slab and perimeters walls
- Chemical injection of cracks identified in the perimeter walls

These upgrades were necessary to preserve the structural integrity of the reservoir and to ensure continued compliance with water storage standards. The work was successfully completed during this reporting period.

Chlorine Line Replacement – Water Treatment Plant to Intake Crib

Also commencing in April 2025, the Town undertook the replacement of the chlorine line running from the Thornbury Water to the intake crib. This line plays a critical role in the initial disinfection process for the Town's drinking water system. Due to its age and declining condition, replacement was required to ensure system reliability.

The new chlorine line was fully installed by the end of June 2025.

Thornbury Water Tower – Two-year Warranty Inspection

As part of the two-year warranty period, the Contractor and Site Engineer returned to the Thornbury Water Tower to perform the scheduled inspection and complete necessary touch-ups in June 2025. Only minor touch-ups were required, and no major deficiencies were noted.

In preparation for the inspection, the Town's Water Operators drained the Water Tower and operated the water system using pressure only. The Water Tower was back online by the end of June 2025.

Distribution System Summary

The following table provides a breakdown of the Water Meter Field Service calls for May 1, 2025, to August 31, 2025:

Table 5 – Water Meter Field Services Summary

Nature of Call	**Number of Calls**
Replace old meters (jammed, remote errors)	10
Repair Meter Other (leaks, reversed, etc.)	21
Water Meter Inspections (re-inspections, renovations, new construction)	20
Billing Verification, Hand Deliveries, Data logs (notices, bills)	34
Install/Repair Radio Units	26
Customer Meetings (usage, pressure, complaints, etc.)	17
Closing Readings	67
Water Turn On	16
Meetings with Contractors, Business Owners, Site Management (Backflow requirements, unauthorized connections, losses etc.)	16

The following table provides a breakdown of the Water Distribution Work Orders completed for May 1, to August 31, 2025.

Table 6 – Distribution Work Orders

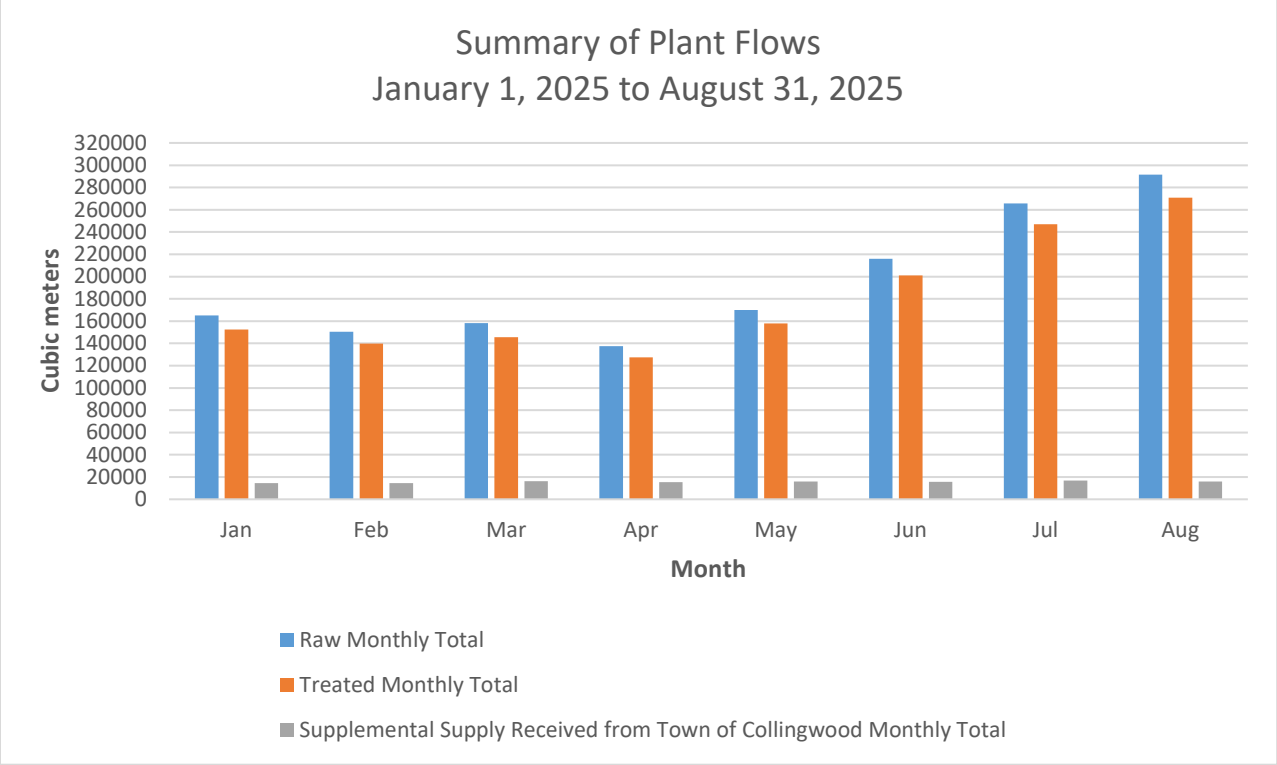
Work Order Description	**Number Completed**
Watermain Repairs	1
Watermain Dig Site Clean up	9
Service Connection Repairs	11
Valves operated (Curb Stop Valves, Main Valves and Hydrant Valves)	597
Annual Fire Hydrant Flushing Program	308

Work Order Description	Number Completed
Dead End Flushing – Number of Hydrants Flushed	262
Fire Hydrant Repairs from Inspections	3
Fire Hydrants Painted	76
Water and Sewer locates completed	702
GPS Unit	39
Chamber Inspections	100
Chamber Repairs	2
Confined Space Entries	15
New Construction	5

Summary of Plant Flows

A summary of the WTP Raw, Treated and supplemental flow supply received from the Town of Collingwood is presented in Graph 1:

Graph 1:



Watermain Break Summary

Watermain breaks are typically reported by members of the public, identified by Town Staff, or discovered during routine visual inspections conducted by Water Operators. When breaks occur, repairs are generally completed by Town Operators, with support received from the Town's Road Department and third-party Contractors as needed.

For the period of May 1, 2025, to August 31, 2025, there was (1) one watermain break.

On June 24, 2025 a watermain break was repaired on Arthur Street West at the Elma Street intersection. (2) two, two-inch holes were found in the cast iron watermain, approximately 18 inches apart. The repair was completed under positive pressure, and an air gap was maintained. The repair was completed same day, with assistance from the Town's Road Department and third-party Contractors to assist with the excavation. This prompt response and collaborative approach ensured minimal disruption to water service and upheld the Town's commitment to maintaining system integrity and public health protection.

Incidents of Adverse Water Quality

This section describes all Adverse Water Quality Incidents (AWQI). This term refers to any treated water test result that does not meet a provincial water quality standard or a situation where disinfection of the Town's drinking water may be compromised. A single AWQI does not necessarily mean that the system's drinking water is unsafe – it indicates that, on at least one occasion, a water quality standard was not met.

The Town's drinking water system is operated in accordance with Ontario Regulation 170/03 and Operators follow the direction of this regulation when dealing with incidents of adverse drinking water. There were no incidents of adverse drinking water during this reporting period, however, an incident was reported to MECP due to an Ultraviolet Transmittance (UVT) bulb failure.

On May 11, 2025, the On-Call Operator logged onto the SCADA system and noted an alarm banner flashing for a UVT system signal error. The transmittance SCADA display was flashing purple with a UVT reading of 93.87. The On-Call Operator did not receive an alarm call-out. The On-Call Operator replaced the lamp and returned the unit to service. The Town's SCADA Integrator programmed a new alarm to call out should this event occur again in the future.

Water Quality Concerns / Resident Complaints

Staff record information relating to the water quality issues on the Resident Water Quality Concern Form. If required, Operators attend the location of concern to collect samples or assess the nature of the concern.

The ongoing analysis of the water quality data is useful in determining if the water quality is changing throughout the distribution system over time. As an example, taste and odor complaints may indicate that the watermain in an area is deteriorating.

A summary of the water quality concerns from residents received during the period of May 1, 2025, to August 31, 2025 is included in Table 7 below:

Table 7 – Water Quality Concerns

Water Quality Concern	Date(s)	Number of Occurrences	Resolution / Comment
Low Water Pressure	May 9, 2025 May 26, 2025 May 28, 2025 June 11, 2025 July 30, 2025 August 19, 2025	6	• Internal shut off valve was closed. Internal plumbing • Pressure checked and found in acceptable range. Internal plumbing • Pressure checked and found in acceptable range. Internal plumbing • Pressure checked and found in acceptable range. Internal plumbing • Pressure checked and found in acceptable range. Internal plumbing • Pressure checked and found in acceptable range. Issue will be addressed during upgrades to Booster Station.
Dirty Water	June 21, 2025	1	• This was the result of the construction activity in the area. Homeowner was advised to flush taps to rectify issue.
Taste	July 4, 2025	1	• Residence within the Thornbury West Servicing Project and connected to the temporary watermain. Bacteriological sample collected and returned 0 EC/TC/HPC