

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT



REPORT TO: Infrastructure and Recreation Committee

MEETING DATE: October 16, 2012

REPORT NO.: EPW.12.080

SUBJECT: Water Section Operations Update – May to August 2012

PREPARED BY: Meg Boyd, Compliance & Efficiency Coordinator

A. Recommendations

THAT Council receive Staff Report EPW.12.080 entitled “Water Section Operations Update – May to August 2012” for their information.

B. Background

Ensuring the safety and quality of the Town’s drinking water system is not only the responsibility of the Water Operators who operate and maintain the system but also the Members of Municipal Council and Municipal Officials who exercise decision-making authority regarding the system.

As mentioned in previous Reports, the purpose of Attachment # 1 – Water Operations Update is to provide up to date information with regards to the status and operation of the Town’s drinking water system and to report on water quality issues for the period of May to August 2012.

Topics such as an Overview of the Town’s drinking water system were provided in the initial report, and as such will only be included intermittently to remind Council of the drinking water system components.

This report addresses:

- Raw and Treated Water Quality Data
- Staff Training
- Distribution System Summary
- Summary of Plant Flows
- Watermain Break Summary
- Incidents of Adverse Water Quality
- Water Quality Concerns / Resident Complaints

The Thornbury WTP and associated distribution system continue to operate within Ministry of the Environment Guidelines and Provincial Legislation.

The attached report demonstrates that Water Operators continue to provide quality drinking water to its residents while ensuring long-term sustainability of the system through regular preventative maintenance programs.

C. The Blue Mountains' Strategic Plan

The acceptance of this Report by Council furthers the Town Strategic Plan Goal # 6 "Providing a Strong, Well-Managed Municipal Government."

D. Environmental Impacts

None

E. Financial Impact

None

F. In Consultation With

None

G. Attached

1. Water Section Operations Update – May to August 2012

Respectfully submitted,

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Water Section Operations Update

May to August 2012



Introduction

Ensuring the safety and quality of the Town's drinking water system is not only the responsibility of the Water Operators who operate and maintain the system but also the Members of Municipal Council and Municipal Officials who exercise decision-making authority regarding the system.

The purpose of this report is to provide Council with a brief overview of the Town's drinking water system and to report on water quality issues for the period of May to August 2012.

This report will address the following:

- Raw, Treated and Distribution Water Quality Data
- Staff Training
- 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 Licence:	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.

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

An overview of the raw water sampling data for the period of May to August 2012 is presented in Table 1:

Table 1 – Raw Water

Parameter	Result Range (Min – Max)
E.Coli	0 to 2
Total Coliform	0 to 12

An overview of the treated water sampling data for the period of May to August 2012 is presented in Table 2:

Table 2 – Treated Water

Parameter	Result Range (Min – Max)
E.Coli	0
Total Coliform	0
HPC¹	0 to 56

¹ Schedule 10 of Ontario Regulation 170/03 requires testing for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC). There are no reporting or corrective action requirements specified in O. Reg 170/03 following HPC test results. HPC's are a good indicator of overall drinking water quality but not water safety.

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 to August 2012 is presented in Table 3:

Table 3 – Distribution

Parameter	Number of Samples	Result Range (Min – Max)	Parameter Limit
E.Coli	170	0	0
Total Coliform	170	0 to 1	0
HPC¹	136	0 to 3	

Staff Training

In accordance with Ontario Regulation 128/04, all Water Treatment and Distribution Operators possess operating licences appropriate to the class of facility where they are employed. As the Town's distribution system is a Class 3 subsystem, Operators are required to complete, at a minimum, 26 hours of on the job practical training and 14 hours of formal Continuing Education Units (CEU) training per year. The majority of staff training occurs during the first quarter and was reported in the previous Operations update.

A summary of the courses attended from May to August 2012 by Operators is provided in Table 4:

Table 4 – Training Overview

Operator Name	Training Course Attended
Darren Shilvock	Health and Safety for Supervisors and Manager (Public Health & Safety Association)
Rob Gilchrist	Standard First Aid CPR/AED Level

Distribution System Summary

The following table provides a breakdown of the Water Meter Field Service calls for May to August 2012:

Table 5 – Water Meter Field Services Summary

Nature of Call	No. of Calls
Frozen meters	1
Replace/Repair jammed meter	2
Replace/Repair remote touchpads	24
Repair meter other (leaks, reversed, etc.)	19
Meter Inspections	24
Billing verification, hand deliveries (notices, bills)	359
Install radio	2
Backflow inspections	0
Thermal Expansion calls	1
Customer meetings (usage, complaints, etc.)	32
Closing readings	132
Commercial meter change outs	0

The following table provides a breakdown of the Water Distribution Work Orders completed for May to August 2012:

Table 6 – Distribution Work Orders

Work Order Description	No. Completed
Watermain Repairs	0
Valves Operated	67
Valves Replaced / New	1
Outstanding Deficiencies arising from fire hydrant inspections (including painting)	315
Service Connection Repairs Complete	25
Service Connection Repairs Outstanding	0
Service Connection Installations	2
Pressure Reducing Valve Inspections	13
Air Relief Valve Inspections	70
Spring and private hydrant flushing program	reported during previous period – Fall flushing will be reported next quarter
Dead End Flushing program (to maintain residuals in the distribution system)	359 hydrants flushed
Water and Sewer Locates	366 locates completed
Automatic flushing stations – weekly check of chlorine residuals	226
Double Drain Chamber Inspections	7
Valve & Meter Pit Inspections	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 Table 4:

Table 4:

Month	Town of The Blue Mountains' Raw Water Flows				Town of The Blue Mountains' Treated Water Flows				Supplemental Flows Received from the Town of Collingwood			
	Monthly Total (m ³)	Daily Average (m ³)	Maximum Day (m ³)	Minimum Day (m ³)	Monthly Total (m ³)	Daily Average (m ³)	Maximum Day (m ³)	Minimum Day (m ³)	Monthly Total (m ³)	Daily Average (m ³)	Maximum Day (m ³)	Minimum Day (m ³)
January	77,044	2,485	7,667	1,078	67,379	2,174	6,732	863	95,155	3,070	3,957	0
February	82,663	2,850	5,045	1,721	72,377	2,496	4,448	1,453	88,779	3,061	4,027	1,714
March	60,847	2,028	3,246	43	54,443	1,756	2,868	0	84,408	2,723	3,834	1,193
April	46,829	1,561	2,414	1,105	41,051	1,368	2,030	975	50,369	1,679	2,310	1,097
May	59,867	1,931	5,893	737	52,578	1,696	5,172	649	75,977	2,451	3,986	0
June	62,824	2,094	6,429	476	55,156	1,839	5,649	419	92,152	3,072	4,032	0
July	120,422	4,014	8,079	1,627	112,254	3,621	7,080	1,436	96,291	3,106	4,005	0
August	87,884	2,835	7,383	918	79,546	2,566	6,520	812	108,438	3,498	4,049	0
Total	598,380				534,784				691,569			
Max	120,422		8,079				7,080		108,438		4,049	
Min	46,829			43				0	50,369			0

Watermain Break Summary

Watermain breaks are typically reported by homeowners or discovered during visual inspections by Operators. In most instances, watermain breaks are repaired by Operators and at times, with the assistance of outside contractors or staff from the Town's Roads Department. There were no watermain breaks for the May 1 to August 31st, 2012 reporting period.

Incidents of Adverse Water Quality

This section describes all Adverse Water Quality Incidents (AWQI). This term refers to any unusual test result from treated water that does not meet a provincial water quality standard or situation where disinfection of the water may be compromised. A single adverse water quality incident does not necessarily mean that drinking water from the system 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 was one incident of adverse drinking water quality in August 1, 2012.

On August 1, 2012, Operators received notification from our accredited laboratory that a sample collected from the Lora Bay – John Watts & Rankins Sample Station contained one (1) Total Coliform count. Operators collected samples upstream, downstream and at the site that yielded the adverse result on August 1st. Samples were collected August 2nd at the same locations and results from both sampling rounds contained zero (0) total coliform. Both the Ministry of Health and the Ministry of the Environment Spills Action Centre were contacted in accordance with Ontario Regulation 170/03 and no additional direction was provided.

Water Quality Concerns/ Resident Complaints

Staff record information relating to water quality issues on the Resident Water Quality Concern Form and then forward data to the GIS Coordinator for tracking. If required, Operators attend the location of concern to collect samples or access 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 odour complaints may indicate that the watermain in a particular area is deteriorating.

A map detailing the water quality concerns received from October 2004 to August 2012 is included on page 8.

The Blue Mountains Engineering and Public Works Water Services Complaint Tracking

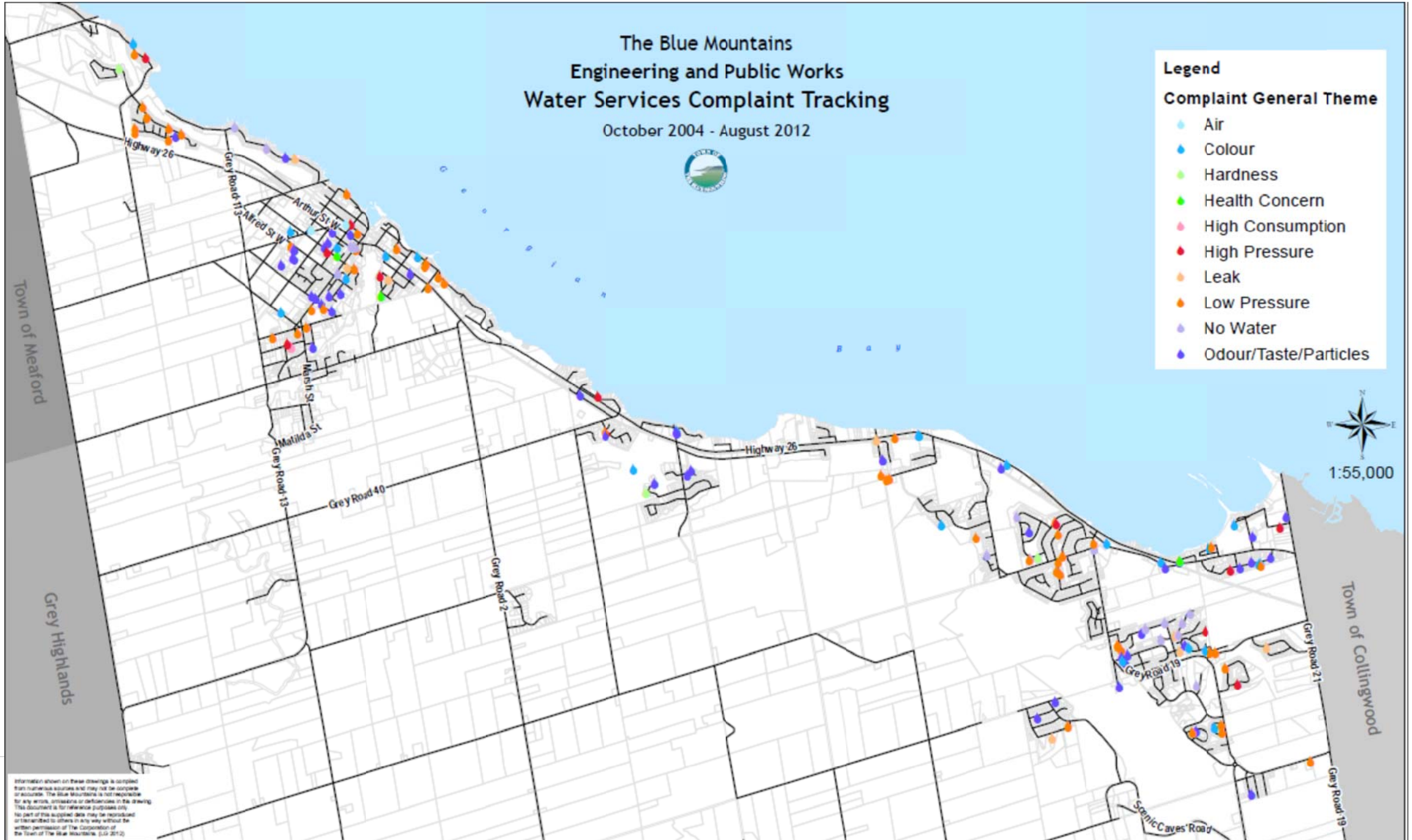
October 2004 - August 2012



Legend

Complaint General Theme

- Air
- Colour
- Hardness
- Health Concern
- High Consumption
- High Pressure
- Leak
- Low Pressure
- No Water
- Odour/Taste/Particles



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