

**STAFF REPORT:      ENGINEERING AND PUBLIC WORKS DEPARTMENT**

**REPORT TO:**                    Infrastructure and Recreation  
   Committee  
**MEETING DATE:**            February 12, 2013  
**REPORT NO.:**                EPW.13.012  
**SUBJECT:**                    Water Section Operations  
   Update – September to  
   December 2012  
**PREPARED BY:**            Meg Boyd, Compliance & Efficiency  
   Coordinator

**A.      Recommendations**

THAT Council receive Staff Report EPW.13.012 entitled “Water Section Operations Update – September to December 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 September to December 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 – September to December 2012

Respectfully submitted,

*Meg Boyd*  
Meg Boyd  
Compliance & Efficiency Coordinator  
Engineering & Public Works  
Office: 519-599-1226  
Fax: 519-599-7723  
[mboyd@thebluemountains.ca](mailto:mboyd@thebluemountains.ca)

*Reg Russwurm*  
Reg Russwurm  
Director, Engineering and Public Works

# Water Section Operations Update

September to December 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 September to December 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

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

## 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 September to December 2012 is presented in Table 1:

**Table 1 – Raw Water**

Parameter	Result Range (Min – Max)
<b>E.Coli</b>	<b>0</b>
<b>Total Coliform</b>	<b>2 to 78</b>

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

**Table 2 – Treated Water**

Parameter	Result Range (Min – Max)	Limit
<b>E.Coli</b>	<b>0</b>	<b>0</b>
<b>Total Coliform</b>	<b>0</b>	<b>0</b>
<b>HPC<sup>1</sup></b>	<b>0 to 51</b>	<b>N/A</b>

<sup>1</sup> 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 September to December 2012 is presented in Table 3:

**Table 3 – Distribution**

Parameter	Number of Samples	Result Range (Min – Max)	Parameter Limit
<b>E.Coli</b>	<b>169</b>	<b>0</b>	<b>0</b>
<b>Total Coliform</b>	<b>169</b>	<b>0</b>	<b>0</b>
<b>HPC<sup>1</sup></b>	<b>134</b>	<b>0 to 97</b>	<b>N/A</b>

## 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 previous Operations update.

With the exception of one Operator, all Water Staff completed the WHMIS Site Specific Training, facilitated by the Town's Health and Safety Coordinator.

## **Distribution System Summary**

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

**Table 5 - Water Meter Field Services Summary**

<b>Nature of Call</b>	<b>No. of Calls</b>
Frozen meters	0
Replace/Repair jammed meter	2
Replace/Repair remote touchpads	15
Repair meter other (leaks, reversed, etc.)	11
Meter Inspections	21
Billing verification, hand deliveries (notices, bills)	344
Install radio	10
Backflow inspections	0
Thermal Expansion calls	1
Customer meetings (usage, complaints, etc.)	22
Closing readings	116
Commercial meter change outs	4

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

**Table 6 – Distribution Work Orders**

<b>Work Order Description</b>	<b>No. Completed</b>
Watermain Repairs	3
Valves Operated	34
Valves Replaced / New	1
Outstanding Deficiencies arising from fire hydrant inspections (including painting)	36
Service Connection Repairs Complete	20
Service Connection Repairs Outstanding	0
Service Connection Installations	2
Pressure Reducing Valve Inspections	0
Air Relief Valve Inspections	42
Fall and private hydrant flushing program	312
Dead End Flushing program (to maintain residuals in the distribution system)	273 hydrants flushed
Water and Sewer Locates	317 locates completed
Automatic flushing stations – weekly check of chlorine residuals	220
Winterizing Hydrants (Pumping Out)	99
Auto Flusher Repairs	2

## 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:**

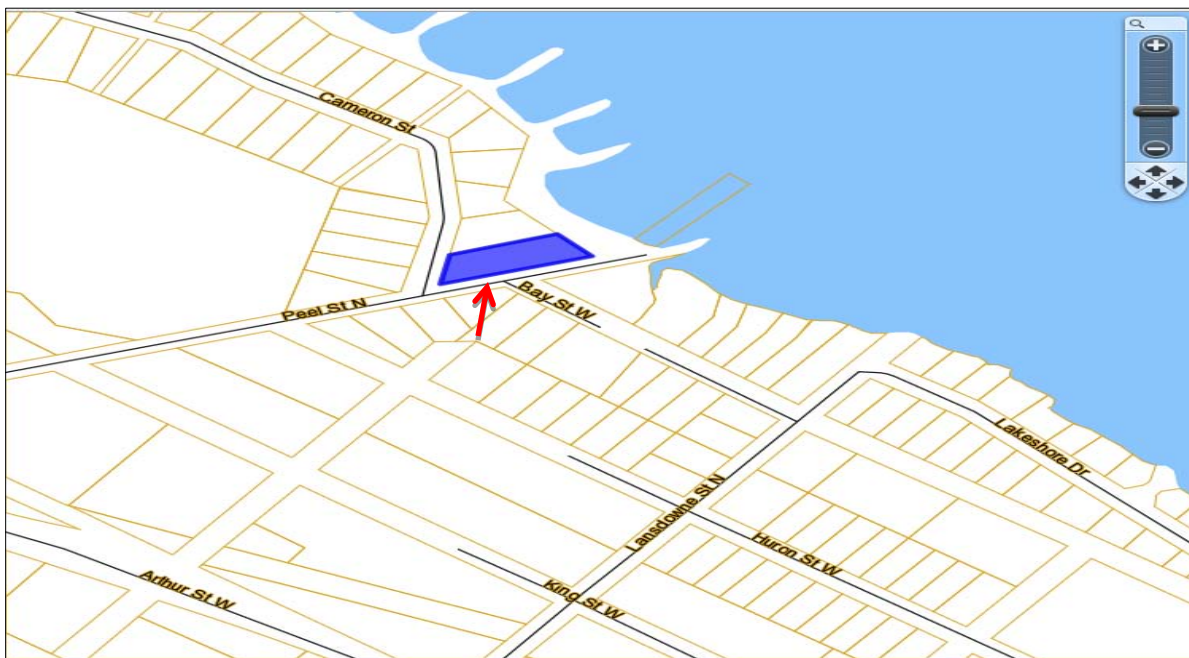
Month	Town of The Blue Mountains' Raw Water Flows				Town of The Blue Mountains' Treated Water Flows				Supplemental Flows Received from the Town of Collingwood			
	Monthly Total (m <sup>3</sup> )	Daily Average (m <sup>3</sup> )	Maximum Day (m <sup>3</sup> )	Minimum Day (m <sup>3</sup> )	Monthly Total (m <sup>3</sup> )	Daily Average (m <sup>3</sup> )	Maximum Day (m <sup>3</sup> )	Minimum Day (m <sup>3</sup> )	Monthly Total (m <sup>3</sup> )	Daily Average (m <sup>3</sup> )	Maximum Day (m <sup>3</sup> )	Minimum Day (m <sup>3</sup> )
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	62,164	2,005	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	128,331	4,140	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
September	54,179	1,806	3,264	1,011	47,668	1,589	2,900	886	84,161	2,805	3,996	2,063
October	55,736	1,798	3,629	456	48,210	1,555	2,995	400	60,634	1,956	3,107	912
November	44,839	1,495	3,688	587	39,553	1,318	3,264	517	44,654	1,488	2,407	0
December	45,594	1,471	2,236	1,007	40,182	1,296	1,990	832	68,281	2,203	4,008	1,228
<b>Total</b>	<b>806,637</b>				<b>710,397</b>				<b>949,299</b>			
<b>Max</b>	<b>128,331</b>		<b>8,079</b>				<b>7,080</b>		<b>108,438</b>		<b>4,049</b>	
<b>Min</b>	<b>44,839</b>			<b>43</b>				<b>0</b>	<b>44,654</b>			<b>0</b>



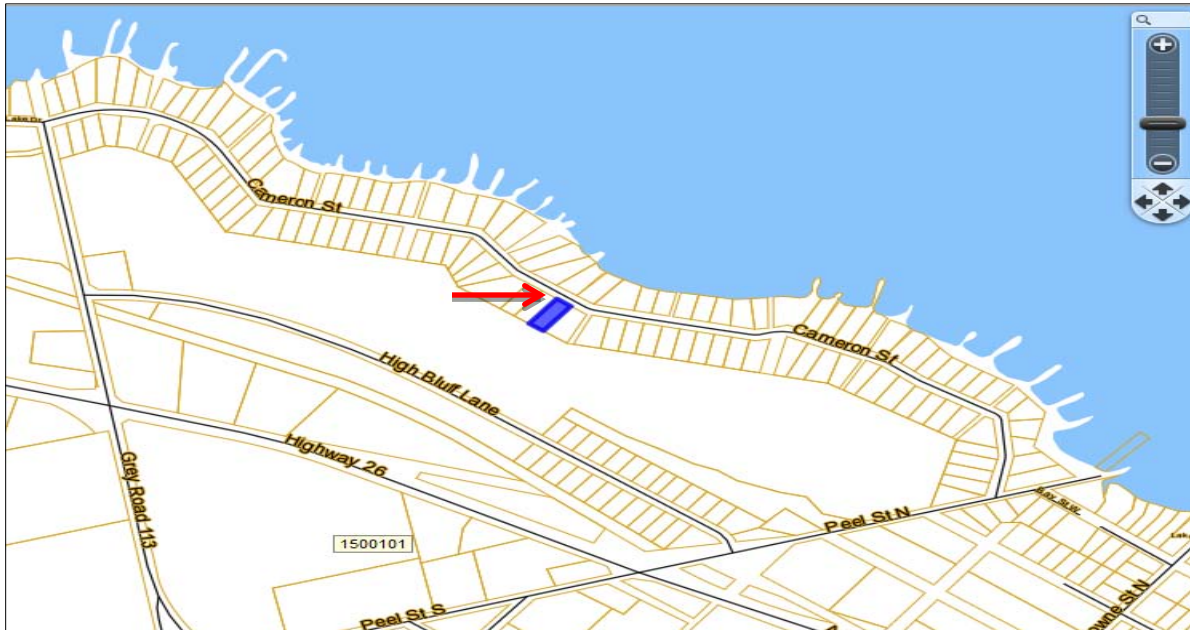
## Watermain Break Summary

Watermain breaks are typically reported by the public, other Town Staff 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 three watermain breaks for the September 1 to December 31<sup>st</sup>, 2012 reporting period.

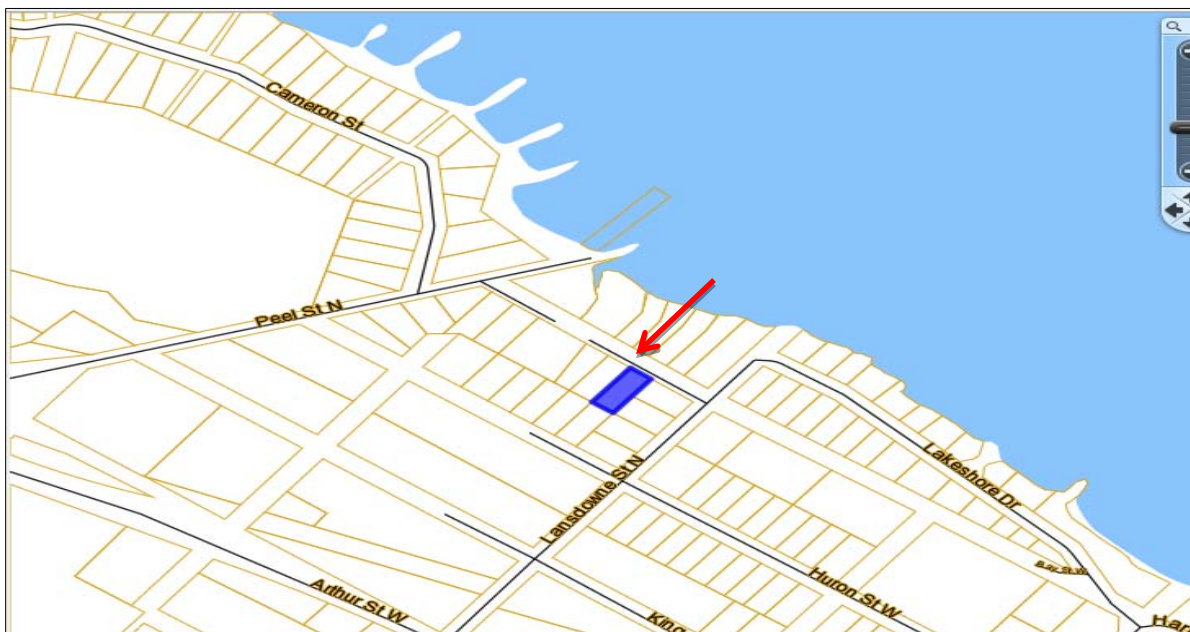
On October 25, 2012, the Water Supervisor reported a watermain break across from 225 Peel Street. The 150mm cast pipe watermain was found to have split on the bottom half of diameter.



On December 3, 2012, a Water Operator reported a watermain break. The 150mm ductile iron pipe was found to have a split, likely due to a large boulder shifting on top of the watermain.



On December 28, 2012, the Parks and Recreation Department reported a watermain break. The 150mm ductile iron pipe was found to have a partial circumference break. This location is currently a dead end watermain with an autoflusher on the end.



## **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 were no incidents of adverse drinking water quality in the period of September 1 to December 31, 2013

## **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 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 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 December 2012 is included on page 10.

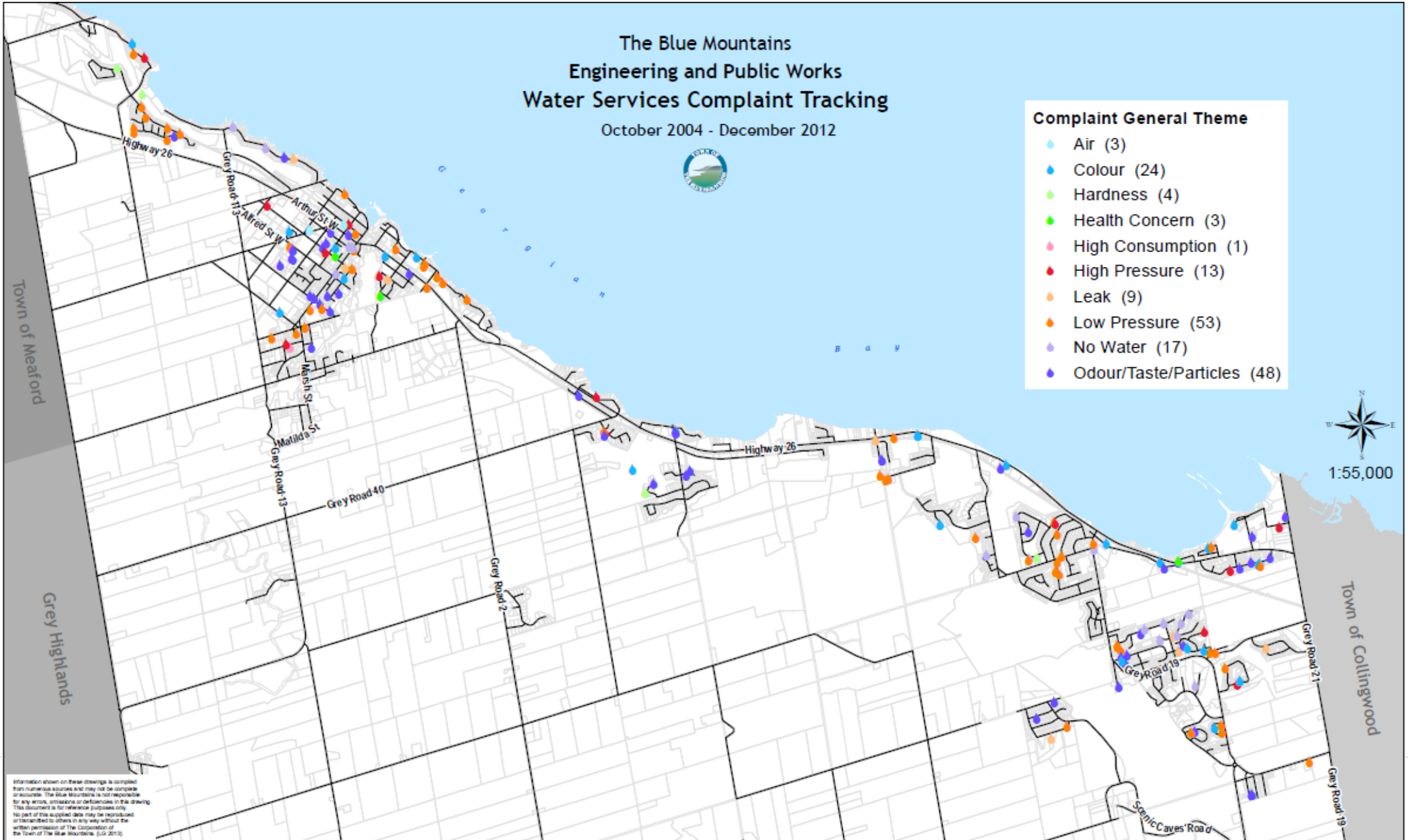
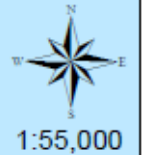
# The Blue Mountains Engineering and Public Works Water Services Complaint Tracking

October 2004 - December 2012



## Complaint General Theme

- Air (3)
- Colour (24)
- Hardness (4)
- Health Concern (3)
- High Consumption (1)
- High Pressure (13)
- Leak (9)
- Low Pressure (53)
- No Water (17)
- Odour/Taste/Particles (48)



Information shown on these drawings is compiled from numerous sources and may not be complete or accurate. The Blue Mountains is not responsible for any errors, omissions or deficiencies in this drawing. This document is for reference purposes only. No part of this supplied data may be reproduced or transmitted to others in any way without the written permission of The Corporation of the Town of the Blue Mountains. (JLG 2013)