

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT



REPORT TO: Infrastructure & Recreation Committee
MEETING DATE: March 8, 2011
REPORT NO.: EPW.11.014
SUBJECT: 2010 Water Summary Report
PREPARED BY: John Caswell, Manager of Water & Wastewater Services/Asst. Director
Meg Boyd, Compliance & Efficiency Coordinator

A. Recommendation

THAT Council receives Report EPW.11.014 entitled "2010 Water Summary Report" for their information.

B. Background

The delivery of potable water in Ontario is regulated by the Ministry of the Environment under the *Safe Drinking Water Act*.

Ontario Regulation 170/03 Schedule 22 requires the Owner of a drinking water system to prepare a Summary Report no later than March 31st of each calendar year that summarizes the following;

- a) list the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and
- b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

The report must also include a summary of the quantities and flow rates of the water supplied during the 2010 period, including monthly average and maximum daily flows as well as daily instantaneous peak flow rates. A comparison of the summary to the related capacity and flow rates approved in the system's approval must also be documented.

For reference, a complete summary of the requirements of Ontario Regulation 170/03 Schedule 22 is appended as Attachment #1.

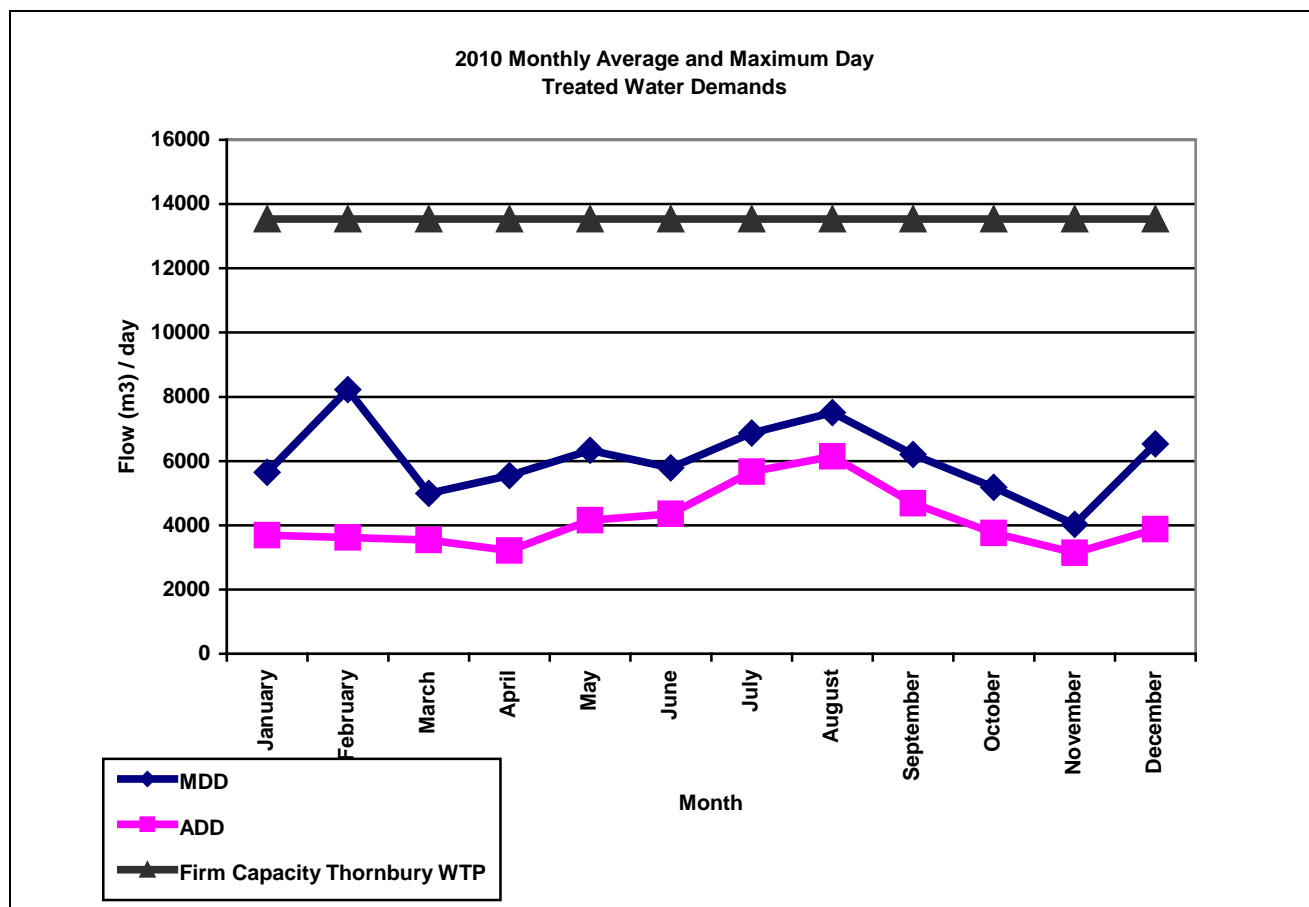
A copy of this Report (Attachment # 2) is required to be presented and accepted by Municipal Council no later than March 31st of each calendar year.

This Report is specific to the Thornbury Water Treatment Plant (WTP) located at 230 Peel Street, its associated distribution system in the Lora Bay, Clarksburg, Thornbury, Camperdown and Craigeith Service Areas and the supplemental supply received from the Town of Collingwood.

Until November 2010, the system operated under Certificate of Approval # 0043-7YAN6W, issued March 24, 2010. Through the implementation of the Municipal Drinking Water Licencing Program, the authority to establish or alter a system is provided through a Drinking Water Works Permit and the authority to use or operate the system is provided through a Drinking Water Licence. On November 10, the Town was issued Permit Number 111-201 and Licence Number 11-101. The newly introduced Permit, together with the Drinking Water Works Licence replaces the previously issued Certificate of Approval.

The Town also receives a supplemental supply of water from the Town of Collingwood to assist with meeting water demands. The water purchase agreement signed by the Town and the Town of Collingwood states the Town shall purchase a minimum of 4,000 cubic meters of water on average for each day until January 2015.

Summary of Treated Flows



*The above graph reflects the total treated water flows from the Thornbury WTP and the supplemental supply received from the Town of Collingwood

**MDD = Maximum Daily Demand, ADD = Average Day Demand

***Firm Capacity does not include Collingwood Supply of 4,000 m³/day

A final requirement of the Drinking Water Quality Management System (DWQMS) is the preparation of a Financial Plan which calls for Municipalities to plan for the long-term financial sustainability of their drinking water systems. A Draft Water Financial Plan will be presented to Council in April 2011.

The Thornbury WTP and its associated distribution system continue to operate within Ministry of the Environment Guidelines and Legislation. The Town received a 100% inspection rating for the 2010-2011 reporting period. All of the requirements listed in Schedule 22 have been met and are detailed in the appending summary report.

The 2010 Water Summary Report is appended to this report as Attachment #2.

C. The Blue Mountains' Strategic Plan

The acceptance of this Report by Council furthers the Town Strategic Plan Goal # 2 "Addressing the Town Municipal Infrastructure Needs" and Goal # 6 "Providing a Strong, Well-Managed Municipal Government."

D. Environmental Impacts

None

E. Budget Impact

None

E. Attached

1. Ontario Regulation 170/03 Schedule 22
2. 2010 Water Summary Report

Respectfully submitted

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SCHEDULE 22
SUMMARY REPORTS FOR MUNICIPALITIES

Municipal: Large Residential
Small Residential

Application

22-1. This Schedule applies to the following drinking water systems:

1. Large municipal residential systems.
2. Small municipal residential systems.

Report

22-2. (1) The owner of a drinking water system shall ensure that, not later than March 31 of each year after 2003, a report is prepared in accordance with subsections (2) and (3) for the preceding calendar year and is given to,

- (a) in the case of a drinking water system owned by a municipality, the members of the municipal council;
- (b) in the case of a drinking water system owned by a municipal service board established under section 195 of the *Municipal Act, 2001*, the members of the municipal service board; or
- (c) in the case of a drinking water system owned by a corporation, the board of directors of the corporation.

(2) The report must,

- (a) list the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and
- (b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

(3) The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water licence, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5 (4), to the flow rates specified in the written agreement.

ATTACHMENT # 1

(4) If a report is prepared under subsection (1) for a system that supplies water to a municipality under the terms of a contract, the owner of the system shall give a copy of the report to the municipality by March 31.

(5) Revoked: O. Reg. 253/05, s. 18.



2010 Water Summary Report

*The Blue Mountains
Water Division*

Waterworks Number: 220001762

Reporting Period: January 1, 2010 – December 31, 2010



TABLE OF CONTENTS

Executive Summary.....	3
Waterworks Description.....	4
Compliance.....	4
Schedule C: System-Specific Conditions.....	5
Schedule D: Conditions for Relief from Regulatory Requirements.....	7
Notifications of Adverse Water Quality Events.....	7
Summary of the Quantity of Water Supplied During the Reporting Period.....	9
Operational Overview.....	12

Appendices

Appendix A	Weekly Sampling Plan
Appendix A-1	Winter Sampling Plan
Appendix B	2010 Summary of Treated Water Flows from the Thornbury Water Treatment Plant
Appendix C	2010 Summary of Supplemental Supply from the Town of Collingwood
Appendix D	2010 Summary of Raw Water Flows from the Thornbury Water Treatment Plant
Appendix E	2010 Maximum Raw Daily Flow Rates Expressed as a Percentage of Capacity
Appendix F	2010 Annual Water Report
Appendix G	Permit to Take Water No. 4176-7DJJZG



WATER SUMMARY REPORT

THORNBURY WATER TREATMENT PLANT WATERWORKS NUMBER: 220001762

Executive Summary

This report has been prepared as required by Ontario Regulation 170/03 – Schedule 22 of the *Safe Drinking Water Act* which states the report must,

a) list the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and

b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

1) A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.

2) A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water licence, or if the system is receiving all of its water from another system under an agreement, to the flow rates specified in the written agreement.

All of the above requirements have been met and will be further explored throughout the report.

A copy of this report is required to be presented and accepted by Municipal Council no later than March 31 of each calendar year.

This report is specific to the Thornbury Water Treatment Plant (WTP) located at 230 Peel Street and its associated distribution system in the Lora Bay, Clarksburg, Thornbury, Camperdown, Craigleith and Swiss Meadows Service Areas. Until November 2010, the system operated under Certificate of Approval # 0043-7YAN6W, issued March 24, 2010. Through the implementation of the Municipal Drinking Water Licensing Program, the authority to establish or alter a system is provided through a Drinking Water Works Permit and the authority to use or operate the system is provided through a Municipal Drinking Water License. On November 10, 2010, the Town was issued Permit Number 111-201 and License Number 111-101. The newly

introduced Permit, together with the Drinking Water Works License replaces the previously issued Certificate of Approval.

Waterworks Description

The Water Treatment is classified as a Large Municipal Residential System. The Water Treatment Plant Subclass System is Class II and the Water Distribution Subclass System is Class III. The raw water source is surface water supplied by Georgian Bay.

The distribution system consists of approximately 120 kilometers of water main owned and operated by the Town of The Blue Mountains (Town). Watermains range in size up to 400 mm, consisting of PVC, ductile iron, cast iron, asbestos cement and high density polyethylene.

The Town also receives a supplemental supply of water from the Town of Collingwood to assist with meeting water demands. The water purchase agreement signed by the Town and the Town of Collingwood states the Town shall purchase a minimum of 4,000 cubic meters of water on average for each day until January 2015.

Compliance

Municipal Drinking Water Licensing Program

The Municipal Water Licensing Program was introduced in response to recommendations made by Justice O'Connor during the Walkerton inquiry. Under the Licensing Program, the Town is required to obtain a license to operate the drinking water system.

The License is comprised of four components; the Drinking Water Works Permit, Implementation of a Drinking Water Quality Management System, Accreditation of the Quality Management System and preparation of a Financial Plan.

- Drinking Water Work Permit provides a description of the system, an authorization for alternations to the system and contains conditions relating to the physical works.
- Drinking Water Quality Management System (DWQMS) is comprised of twenty-one elements that addresses all aspects of the water system. The overall goal of the DWQMS is continuous improvement with respect to planning, operating and reviewing the drinking water system.
- Accreditation of the Operating Authority consisting of a third-party audit of the Operating Authorities compliance with the Quality Management System criteria. The Canadian General Standards Board (CGSB) is currently contracted to perform third-party audits.
- Ontario Regulation 453/07 requires that the Owner prepare a Financial Plan for the drinking water system. The Plan must be submitted to the Ministry of Municipal Affairs and Housing by May 10, 2011. The Plan must include details of the proposed or projected financial operations of the drinking-water system itemized by:
 - total revenues, water rates, user charges and other revenues
 - total expenses, amortization expenses, interest expenses, and other expenses
 - annual surplus or deficit

- accumulated surplus or deficit

On June 24th, 2009 the Town applied for accreditation under the Limited Scope – Entire DWQMS accreditation option which is based on the documentation review of twenty of the twenty one elements in the Operational Plan. The twenty-first element deals with continual improvement of the DWQMS. The Town's Operational Plan was reviewed by the accreditation body, CGSB, and on November 10, 2010, the Town received its Municipal Drinking Water License and Drinking Water Works Permit.

During 2010 there were no incidents of non-compliance with the water system's Certificate of Approval, Drinking Water Works Permit, Drinking Water Works License or Ministry of the Environment regulatory requirements. There were two incidents of adverse water quality that will be discussed later in this report.

Compliance with Permit Number 111-201 and License Number 111-101 issued for The Blue Mountains Drinking Water System

The Thornbury Water Treatment Plant is owned by the Corporation of the Town of The Blue Mountains and is operated by employees of the Town's Water and Wastewater Services Division. Water Operators maintain the associated distribution system, reservoirs and booster pumping facilities. Staffing levels are maintained to ensure adequate numbers of trained and licenced personnel are available for proper operations during emergency or upset conditions or to deal with equipment breakdown. Operator meetings are conducted to allow Staff to review existing regulations and any associated amendments made. Staff training requirements are frequently reviewed to ensure all Operations staff have met the training requirements set out in Ontario Regulation 128/04 of the *Safe Drinking Water Act*.

Contingency plans and operations manuals are established and located at each Reservoir/Booster Station as well as the Thornbury Water Treatment Plant and Water Operations Center. Operations manuals include information necessary for the day to day operations and maintenance of the Water Treatment Plant and Distribution System. Contingency plans include information that may be required for proper operation of the Water Treatment Plant and Distribution system. Contingency plans provide Operations staff with procedures to ensure work is being performed in a consistent manner and contain such items as emergency plans and contacts, supplier contact lists, and a key list of equipment.

Schedule C: System-Specific Conditions

Section 1.0 – Rated Capacity – *The maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed 13,536 m³*

There were no instances during this reporting period where the flow rate exceeded the rated capacity.

Section 1.5 – Residue Management – *The annual average concentration of Suspended Solids shall not exceed 25 mg/L.*

Samples requiring analysis for suspended solids are collected during the first week of every month and analyzed by an accredited laboratory. Twelve samples were collected with an annual average of 4 mg/L.

Section 1.6 – UV Disinfection Equipment Performance

Ultra violet (UV) disinfection is the method of disinfection in which ultraviolet irradiation is used to inactivate target organisms in the water source and is the primary disinfection used at the Thornbury WTP. Ultra violet disinfection equipment is installed and operated such that a UV dosage of at least 40 mJ/cm² is maintained. A dosage of less than 40 mJ/cm² triggers a shutdown of the UV and high lift pumps. A UV transmittance meter measures the waters ability to transmit light and is expressed as a percentage to show what measure of disinfection is achieved.

Section 2.1 – Flow Measurement and Recording Requirements

Flow measuring devices for measuring the amount of raw water taken from Georgian Bay and the amount of water supplied to the distribution system are calibrated annually as per manufacturer's instructions. The flow rate and daily volume of water conveyed from the treatment system to the distribution system is accomplished through the treated water flow meter and recorded on Supervisory Control And Data Acquisition (SCADA) trending printouts.

Section 4.0 – Additional Sampling, Testing and Monitoring

Water sampling is conducted as per the requirements outlined in Schedule 10 and 13 of Ontario Regulation 170/03. Water samples are collected throughout the distribution system at designated sampling stations as well as at Reservoirs and Booster Stations. Raw water sampling provides Operators with the necessary information to determine the appropriate level of treatment required to make the water potable while treated water and distribution samples are vital for ensuring the quality of water provided to residents is in accordance with Ministry of the Environment Standards.

A weekly sampling plan¹ dictates the weekly sampling locations and is reviewed and revised as necessary. During the winter months, a winter sampling plan² is used. Samples requiring annual analysis are typically collected during the first week of April and are analyzed by an accredited laboratory.

Trihalomethane sampling is conducted at the extremities in the distribution system. All sampling is conducted in accordance with Ministry of the Environment Regulations and is monitored on a regular basis.

Chemicals used in the operation of the drinking-water system that are in contact with water within the system meet all applicable standards as established by AWWA, ANSI, NSF 60 and NSF 61 safety criteria standards. Material Safety Data Sheets are available for all chemicals and materials used.

¹ Refer to Appendix A – Sampling Locations

² Refer to Appendix A-1 – Winter Sampling Locations 2009-2010

Schedule D: Conditions for Relief from Regulatory Requirements

The Town qualified for reduced lead sampling and frequency and as such we were not required to collect samples for lead during the 2010 reporting period.

Non-Compliance with the Drinking Water Works Permit and Drinking Water License

There were no issues of non-compliance with the Permit and License.

Non-Compliance with Regulatory Requirements and Actions Required Resulting from Ministry of the Environment Inspection

An inspection was completed by Ministry of the Environment officials on October 27, 2010. The primary focus of the inspection was to confirm compliance with Ministry of the Environment legislation and control documents, as well as conformance with Ministry related policies for the inspection period.

Findings:

Non-Compliance with Regulatory Requirements and Actions Required	Not Applicable
Summary of Best Practice Issues and Recommendations	Not Applicable

In order to measure individual drinking water systems inspection results, the Ministry established an inspection compliance risk framework based on the principles of the inspection. The Inspection report includes an Inspection Summary Rating Record which is designed to encourage drinking water systems to strive for continuous improvement. Based on the Ministry established rating methodology, the Blue Mountains Drinking Water System received a 100% rating for the 2010-2011 reporting period.

Notifications of Adverse Water Quality Events

Ontario Regulation 170/03 outlines the instances in which notifications are required when a parameter used to measure water quality exceeds a Maximum Acceptable Concentration (MAC). Once notification is received from the laboratory or Operations staff, Operators are to follow the steps as outlined in the Reporting Adverse Water Quality Results ~ Notification by Laboratory Procedure.

There were two incidents in which a MAC was exceeded during the 2010 reporting period. This adverse is summarized below:

- On March 10, 2010 the Town received notification of a Total Coliform Adverse from our accredited laboratory
- The water sample result indicated a Total Coliform Count of 1 CFU/100mL which is above the MAC of 0 CFU/100mL

- In accordance with Ontario Regulation 170/03 Schedule 16, verbal and written notification of the adverse sample result was made to both the Grey Bruce Health Unit and the Spills Action Center
- The Grey Bruce Health Unit instructed Operators to resample as per Ontario Regulation 170/03 until two consecutive sets of samples produced Total Coliform Counts of 0 CFU/100mL
- Re-sampling of 3 sites (the adverse site, 1 upstream, 1 downstream) was conducted on March 10, 2010 and sent to our accredited laboratory to be analyzed
- On March 12, 2010 the Town received notification that the resample of the original adverse site returned a Total Coliform Count of 1 CFU/100mL
- The sites upstream and downstream of the adverse site returned Total Coliform Counts of 0 CFU/100mL
- In accordance with Ontario Regulation 170/03 Schedule 16, verbal and written notification of the second adverse sample result was made to both the Grey Bruce Health Unit and the Spills Action Center
- The Grey Bruce Health Unit instructed Operators to continue re-sampling as per Ontario Regulation 170/03 until two consecutive sets of samples produced Total Coliform Counts of 0 CFU/100mL
- The Grey Bruce Health Unit assured Operators that additional action to prevent public consumption of the water at the adverse site was not warranted as the Total Coliform Count of 1 CFU/100mL did not pose a risk to human health
- Re-sampling was conducted and two consecutive sets of samples results returned Total Coliform Counts of 0 CFU/100mL
- All associated paperwork was completed and provided to the Grey Bruce Health Unit and the Spills Action Center as per Ontario Regulation 170/03

Summary of the Quantity of Water Supplied During the Reporting Period

Appended to this report (Appendix B) are the treated water flows for the Thornbury Water Treatment Plant for the 2010 reporting period. The Thornbury Water Treatment Plant services a population of approximately 17, 270 residents, including commercial, industrial and resort facilities. As noted in Chart No. 1 below, there is a significant increase in water demand during the peak periods of July and August. The increase in water demands during the “peak” recreational periods is attributed to the seasonal tourist influx. Appended to this report (Appendix C) are the supplemental flows received from the Town of Collingwood for the 2010 reporting period.

Chart No. 1 below summarizes the monthly totals of Treated Water Flows for the Thornbury Water Plant as well as the additional supply received from the Town of Collingwood.

Chart No. 1

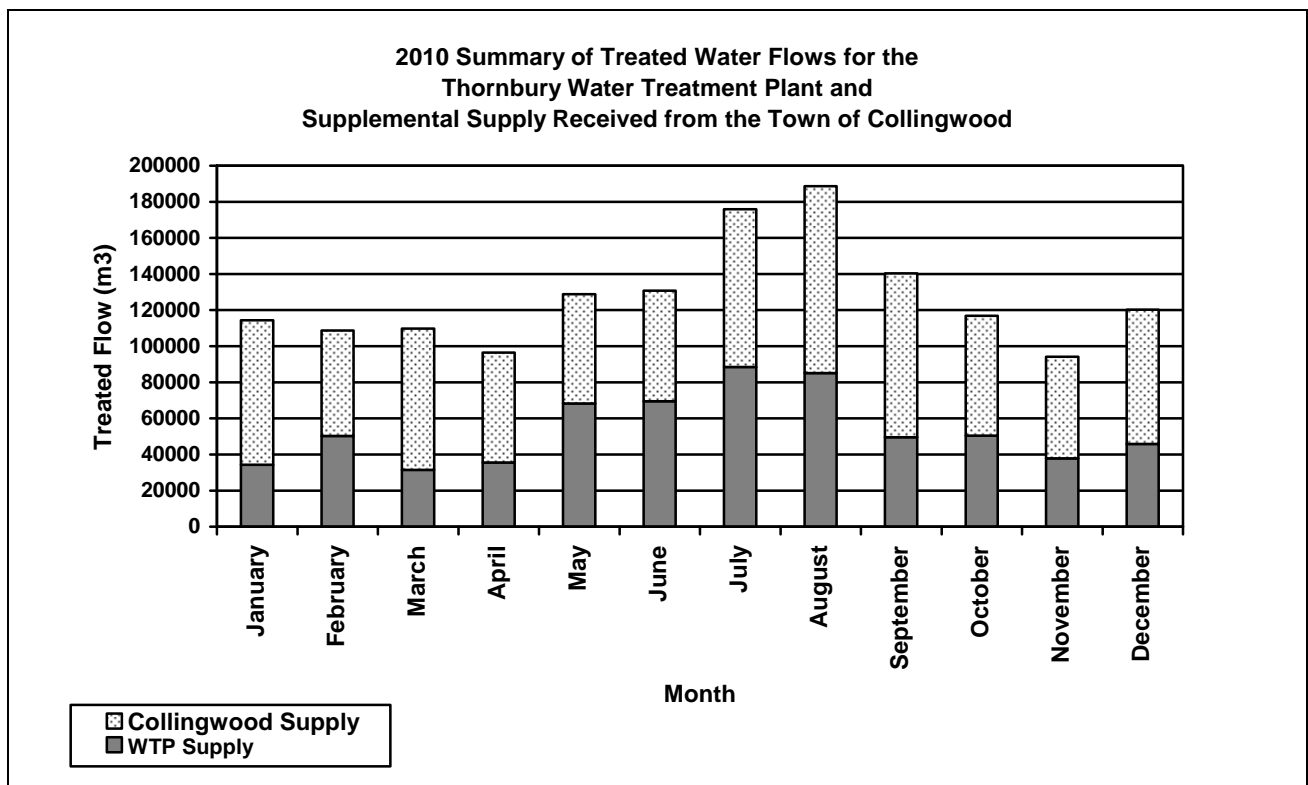
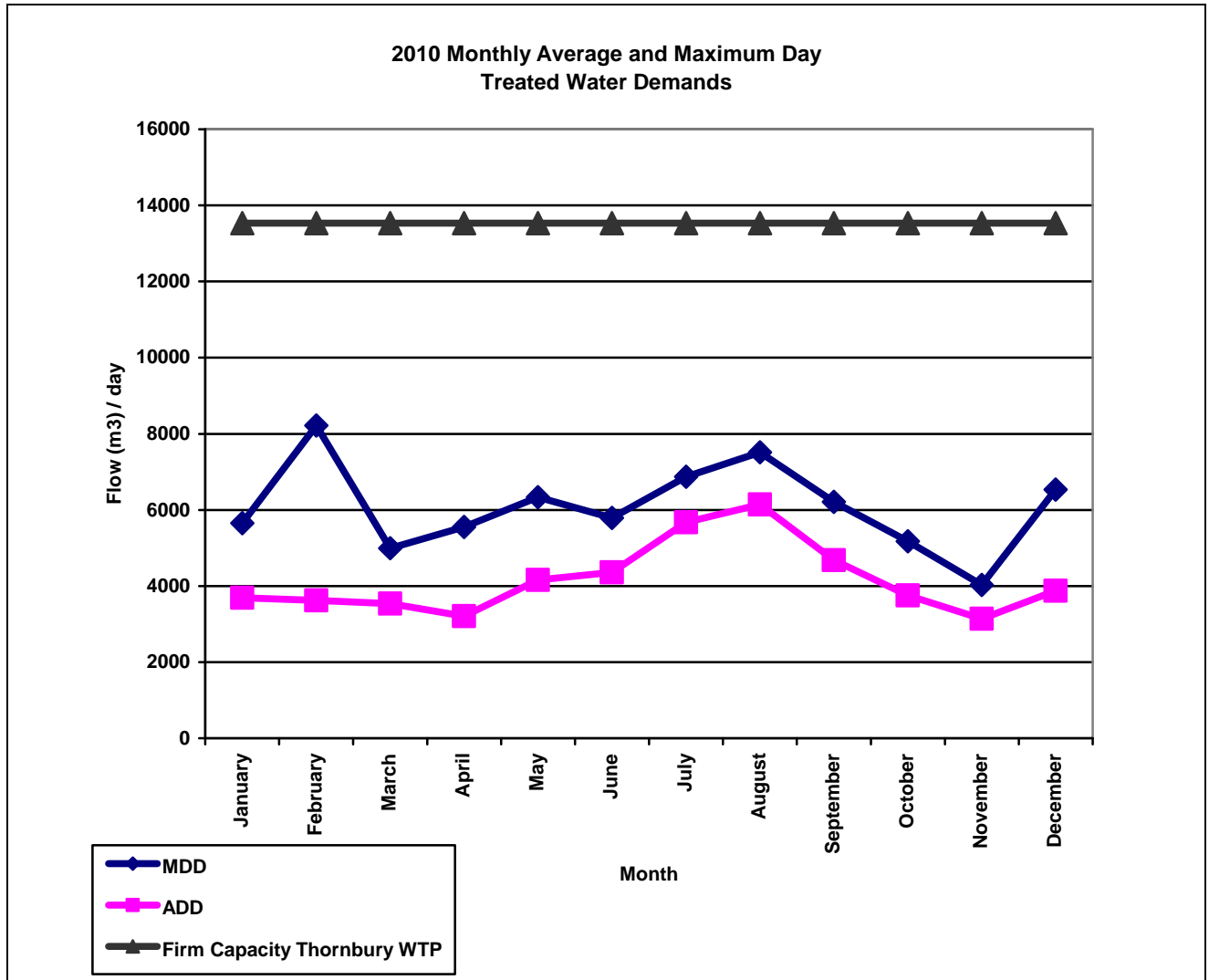


Chart No. 2 reflects the monthly average daily demands (ADD) and monthly maximum daily demands (MDD) for the treated water at the Thornbury WTP as well as the supplemental supply received from the Town of Collingwood.

Chart No. 2



* The above graph reflects the total treated water flows from the Thornbury WTP and the supplemental supply received from the Town of Collingwood

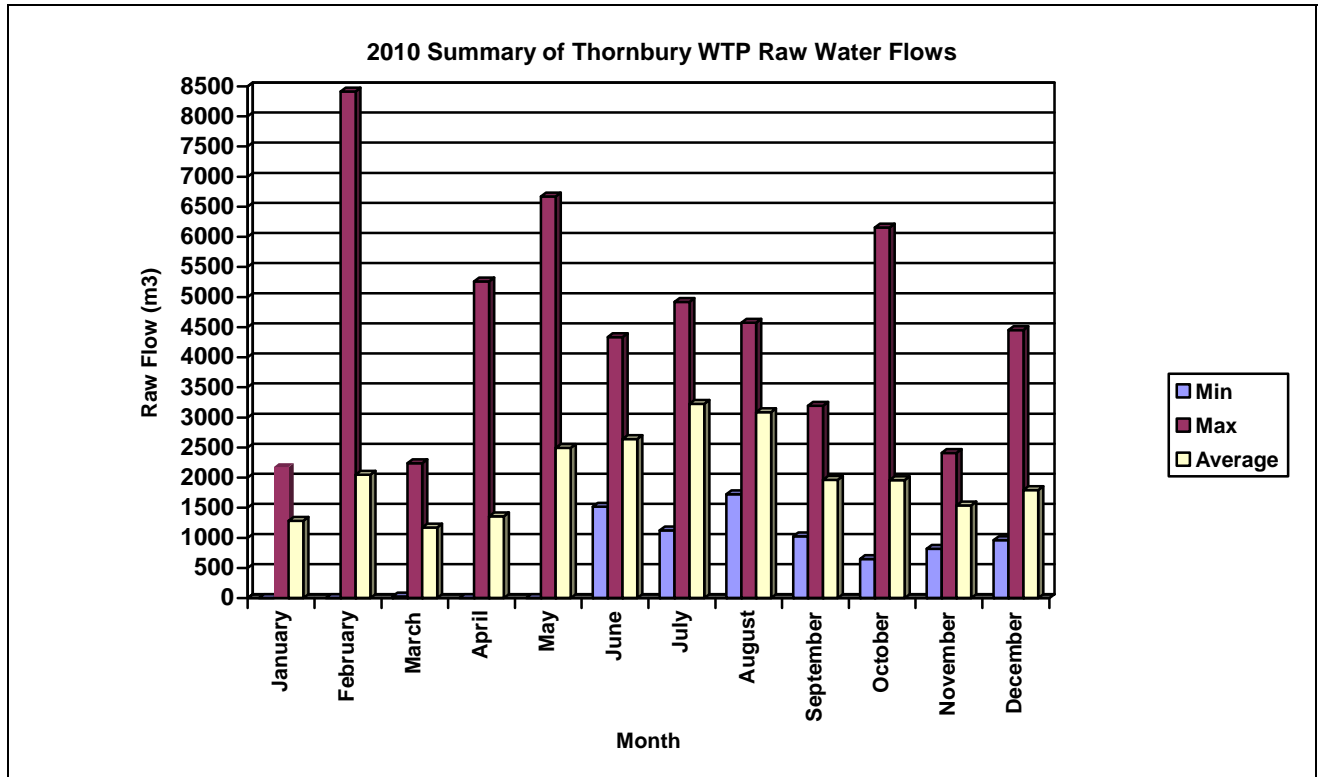
**Firm Capacity does not include Collingwood Supply of 4,000 m³/day

From June 1 through to and including September 1, the Town imposed restrictions on external water use. The restrictions are in force to encourage water conservation efforts as well as control maximum day demands. During 2010, the Town imposed Stage 1 water restrictions which, restricts residents' external water use to between the hours of 7:00am and 9:00am and 7:00pm and 9:00pm on specified calendar days. Properties with odd numbered addresses can water on odd numbered calendar days. Properties with even numbered addresses can water on even numbered calendar days

Raw Water Flows for the Thornbury Water Treatment Plant

Appended to this report (Appendix D) and included below in Chart No. 3 below are the raw water flows into the Thornbury Water Treatment Plant for the 2010 reporting period.

Chart No. 3³



³ Maximum Raw Flow date occurred on February 7, 2010 – due in part to a water main break on Alice Street. Plant output on this day was approximately 160 L/s from 10:00am – 4:30pm

³ Minimum Flow in January, February, April and May was 0 m³ /day. Minimum Flow in March was 28m³ / day

Raw Water Flows Versus Capacity

A daily summary of the maximum daily flow rates expressed as a percentage of capacity is included in Appendix E.

Operational Overview

There were three watermain breaks in the 2010 reporting period. The breaks occurred in the Thornbury area on cast iron pipe. All breaks were repaired same day with minimal water service interruption to consumers.

Installation of six fire hydrants - three on Hidden Lake Road and three on James Street

Hydraulic Water Model – The Consultant has completed an existing condition model that Staff is reviewing. In 2011, the Consultant will input further flow monitoring and finalize a Town wide calibrated model.

Plan 915 – replacement and commissioning of approximately 795m of 150mm watermain and 70m of 200mm watermain.

APPENDIX A



Sampling Locations

Week # 1	Week # 2	Week # 3	Week # 4	Week # 5
Sunset Blvd DE SS (030)	Keepers Cove Meter Building	West Ridge DE Phase 1 SS (032)	Lora Bay East Ridge SS (002)	Lora Bay - John Watts & Rankins SS (001)
Lora Bay Clubhouse SS (003)	Cameron Street SS (004)	Louisa Street East SS (008)	Keepers Cove Meter Building	Lora Bay Drive SS (031)
Duncan Street SS (005)	Far Hills Club - Alfred Street SS (024)	Geo. Bay Clubhouse Condos (010)	Edward Street SS (006)	Louisa / Hester SS (007)
Camperdown Court SS (012)	Geo. Bay Clubhouse PRV Chamber (009)	Aspen Way / Old Lakeshore SS (015)	Geo. Bay Clubhouse PRV Chamber (009)	Camperdown Court SS (012)
Blueski George Crescent SS (026)	Barclay Blvd SS (029)	Orchard - National Drive SS (025)	Camperdown - Stone Zack Lane SS (011)	Barclay Blvd. SS (029)
Drakes Path SS (018)	Oak Court SS (014)	Arlberg Crescent SS (017)	Teskey Drive SS (028)	Arlberg Crescent SS (017)
Patricia Drive SS (020)	Brophy's Lane SS (016)	Timmons Street SS (027)	Wards Road Booster Station	Monterra/Grand Cypress SS (019)
Mountain Road Booster Station	Monterra/ Grand Cypress SS (019)	Patricia Drive SS (020)	Mountain Road Booster Station	Mountain Road Booster Station
Swiss Meadows Standpipe	Mountain Road Booster Station	Mountain Road Booster Station	Mountain Road SS (021)	Patricia Drive SS (020)
Beaver Valley Community School	Swiss Meadows Scandia SS (022)	Swiss Meadows Maple SS (023)	Swiss Meadows Scandia SS (022)	Swiss Meadows Maple SS (023)



Winter Sampling Locations

Week # 1	Week # 2	Week # 3	Week # 4	Week # 5
10th Line Booster Station	10th Line Booster Station	10th Line Booster Station	10th Line Booster Station	10th Line Booster Station
Water Operations Center	Water Operations Center	Water Operations Center	Water Operations Center	Water Operations Center
Town Office	Town Office	Town Office	Town Office	Town Office
Thornbury Reservoir	Thornbury Reservoir	Thornbury Reservoir	Thornbury Reservoir	Thornbury Reservoir
Camperdown Reservoir	Camperdown Reservoir	Camperdown Reservoir	Camperdown Reservoir	Camperdown Reservoir
Arrowhead Road Booster Station	Arrowhead Road Booster Station	Arrowhead Road Booster Station	Arrowhead Road Booster Station	Arrowhead Road Booster Station
Happy Valley Booster Station	Happy Valley Booster Station	Happy Valley Booster Station	Happy Valley Booster Station	Happy Valley Booster Station
Mountain Road Booster Station	Mountain Road Booster Station	Mountain Road Booster Station	Mountain Road Booster Station	Mountain Road Booster Station
Swiss Meadows Standpipe	Swiss Meadows Standpipe	Swiss Meadows Standpipe	Swiss Meadows Standpipe	Swiss Meadows Standpipe
Wards Road Booster Station	Wards Road Booster Station	Wards Road Booster Station	Wards Road Booster Station	Wards Road Booster Station

Compliance Report - 2010 Summary of Treated Water Flows

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1st	1574	830	1145	1583	1890	2639	2574	4054	2836	2017	1618	3655
2nd	1796	1001	1519	330	1208	3732	3676	3178	1918	1369	906	941
3rd	1506	1296	1000	1249	1380	2376	4037	2662	1609	1448	953	808
4th	836	0	1416	1203	1513	3867	3166	3740	1886	1626	1471	1032
5th	800	1171	1805	539	2327	2445	3674	2263	2717	1456	1861	853
6th	1031	2296	895	1276	0	1646	4197	4029	2292	1752	1195	924
7th	0	7472	1983	1007	1175	3010	4147	2865	1956	1469	1261	1233
8th	1365	889	1362	1142	1028	2465	2668	3135	1367	1434	1218	1238
9th	1031	965	1083	560	1011	2161	3451	1932	1373	1240	1509	1506
10th	1081	814	1005	1445	1876	2742	3920	2192	2409	1627	675	1287
11th	316	2232	1122	1106	793	2431	2541	2575	1173	2143	881	1403
12th	627	2938	1610	1310	1576	2187	2607	2644	860	1943	1181	1276
13th	1246	2331	1117	1118	1499	2059	2501	3390	1736	5136	1095	1092
14th	0	1999	1046	448	1492	1970	2767	2864	1445	2237	1279	1395
15th	1135	1703	1189	598	850	1637	3117	2684	2262	2322	1352	1169
16th	1240	1498	856	1492	1861	2000	2164	2642	929	1026	1851	1215
17th	1609	1120	486	594	1738	2093	2908	3160	2107	1506	1485	1450
18th	1015	1530	689	1128	1414	2206	2354	2669	1604	1544	1080	967
19th	1763	1225	1573	1074	1722	2543	1586	2643	1504	1085	1384	849
20th	616	4652	969	4690	458	3398	3483	2470	1665	1413	1116	1638
21st	1486	2631	825	839	863	2157	997	2353	1925	1254	1019	1381
22nd	1071	1436	737	874	2119	1590	4362	2554	1575	1311	1216	1538
23rd	1396	1294	0	1843	5285	1959	2815	1525	850	1685	1405	2055
24th	1653	683	821	1404	5545	1714	1884	2616	1096	1009	1078	1605
25th	649	1666	555	1154	5925	2365	2702	2116	1487	1322	970	922
26th	0	1169	745	917	4327	2078	1549	2292	1467	2031	1926	1183
27th	1920	1964	864	1477	4793	2985	3322	2326	1240	780	929	1207
28th	578	1475	449	1339	3604	1345	1657	2942	1225	2006	926	2149
29th	1657		1356	0	4068	1729	1898	3489	1274	1585	1957	2436
30th	1634		23	1871	2352	1957	3413	2867	1836	1088	1160	2239
31st	1624		1301		2713		2404	2185		557		3161
Total	34255	50280	31546	35610	68405	69486	88541	85056	49623	50421	37957	45807
Average	1105	1796	1018	1187	2207	2316	2856	2744	1654	1626	1265	1478
High	1920	7472	1983	4690	5925	3867	4362	4054	2836	5136	1957	3655
Low	0	0	0	0	0	1345	997	1525	850	557	675	808

All flows are in cubic meters

Compliance Report - 2009 Summary of Supplemental Supply Flows from Town of Collingwood

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1st	3869	2065	2071	2099	2217	1225	2416	3456	3372	2072	1814	1342
2nd	3857	1650	1778	2807	1439	868	2415	3451	3402	2577	2337	1937
3rd	3695	2533	1940	3213	988	758	2396	3436	3437	2527	1787	2290
4th	2602	2490	2115	2127	1694	1881	2418	3118	3457	2619	1714	2503
5th	2193	2555	2699	1593	1769	1250	2415	3431	3444	2474	2011	2064
6th	1967	1397	3212	1888	2350	1703	2420	3398	3451	2350	2392	1831
7th	2351	749	2760	1429	2452	1403	2381	3428	3423	2742	2064	1632
8th	2215	768	2263	1605	1994	1866	2418	3426	3358	2620	1826	1510
9th	3169	2537	2210	1687	1847	2049	2415	3200	2846	3096	1799	1091
10th	3862	1910	1976	1933	2531	2239	2406	3442	2758	3222	1803	1794
11th	2560	742	1974	1883	2254	2362	2417	3422	3347	3036	2189	2296
12th	1620	1943	2329	2197	2342	2417	2410	3431	3000	1267	2048	2212
13th	1728	3125	2549	2159	2334	2184	2418	3437	2976	0	2354	1513
14th	1801	3327	3014	1727	2389	2236	2417	3444	3239	0	2278	1955
15th	2461	2827	2864	1899	2675	2277	2412	3448	2898	2094	1505	1251
16th	3220	2079	3472	2144	2480	2229	3427	3454	3220	2462	1203	1834
17th	3345	2538	3426	2479	2479	1984	2818	3456	3138	2147	1674	2090
18th	1438	2266	2970	1956	2499	2411	3504	3451	3131	2374	1679	3190
19th	1544	1907	3099	984	3133	2406	3435	3435	3334	1962	1803	2846
20th	1745	959	3464	861	3217	2394	2662	3454	2996	1814	2722	1561
21st	2080	1754	2376	1541	2454	2200	2046	3454	2763	2385	1995	2584
22nd	2575	1948	2174	1808	3362	2397	2509	3435	2532	1822	1867	2576
23rd	3170	2072	2202	2185	913	2096	3452	3448	2846	2590	1517	3056
24th	2941	2019	2166	2716	0	2048	3431	2756	2982	2446	1609	3118
25th	1772	2006	2511	2319	0	2409	3456	3165	2880	1872	1565	3289
26th	2520	2382	2292	1873	501	2401	3458	3306	2892	1677	2103	3597
27th	2798	3004	2863	2115	173	2403	3323	3420	2640	1835	2308	3324
28th	2172	2852	1995	2562	1218	2413	3452	3386	2206	1826	2173	3954
29th	1989		1643	2947	2264	2410	3287	3428	2108	2157	1318	3419
30th	3337		2168	2031	2265	2360	3437	3444	2665	2248	746	3330
31st	3512		3695		2207		3455	2155		2023		3373
Total	80108	58404	78270	60767	60440	61279	87326	103615	90741	66336	56203	74362
Average	2584	2086	2525	2026	1950	2043	2817	3342	3025	2140	1873	2399
High	3869	3327	3695	3213	3362	2417	3504	3456	3457	3222	2722	3954
Low	1438	742	1643	861	0	758	2046	2155	2108	0	746	1091

All flows are in cubic meters

Compliance Report - 2010 Summary of Raw Water Flows

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1st	1918	1011	1395	1943	2102	2970	2898	4576	3192	2403	1923	4454
2nd	2034	1158	1702	384	1366	4195	4134	3619	2330	1653	1167	1329
3rd	1709	1453	1249	1401	1564	2766	4542	2993	1829	1730	1136	963
4th	1069	0	1595	1366	1802	4335	3555	4179	2131	1942	1750	1239
5th	989	1325	2043	617	2614	2738	4130	2557	3055	1728	2204	1009
6th	1262	2583	1021	1533	0	1836	4812	4526	2571	2279	1432	1115
7th	0	8413	2239	1132	1325	3377	4671	3236	2197	1769	1516	1459
8th	1543	1131	1625	1289	1164	2760	3164	3522	1487	1714	1546	1589
9th	1173	1103	1201	638	1144	2424	3877	2250	1637	1444	1791	1800
10th	1218	927	1136	1622	2101	3090	4419	2452	2906	1925	819	1534
11th	362	2578	1270	1259	901	2723	2881	2884	1413	2546	1054	1648
12th	952	3459	1812	1571	1779	2459	2932	2995	1034	2332	1400	1545
13th	1514	2643	1259	1271	1680	2309	2810	3812	2093	6153	1302	1301
14th	0	2263	1252	501	1677	2462	3142	3225	1736	2667	1536	1772
15th	1286	1936	1433	682	1116	2201	3512	2999	2703	2798	1602	1587
16th	1399	1788	1080	1694	2104	2250	2417	2958	1163	1236	2322	1574
17th	1800	1271	550	678	1945	2606	3280	3552	2814	1800	1762	1728
18th	1151	1737	766	1267	1687	2472	2671	3024	1927	1849	1302	1143
19th	1968	1390	1745	1228	1927	2866	1764	2983	1808	1349	1771	1013
20th	790	5247	1106	5260	526	3832	3896	2798	1990	1681	1330	1946
21st	1808	2956	938	938	954	2419	1124	2648	2299	1511	1205	1649
22nd	1220	1712	929	983	2383	1872	4916	2865	1890	1551	1679	1840
23rd	1570	1467	97	2068	5935	2215	3277	1722	1025	2015	1750	2461
24th	1843	770	920	1562	6244	1938	2126	2928	1325	1187	1315	2066
25th	739	1890	606	1313	6667	2649	3041	2440	1786	1624	1262	1090
26th	0	1315	844	1136	4847	2328	1751	2567	1774	2549	2408	1414
27th	2175	2203	981	1670	5524	3365	3724	2599	1486	1079	1123	1443
28th	760	1663	512	1625	4053	1516	1863	3303	1468	2421	1105	2578
29th	1853		1630	0	4564	2036	2131	3925	1534	1883	2352	2901
30th	1811		28	2117	2627	2201	3838	3221	2255	1278	1372	2667
31st	1860		1445		3047		2717	2427		645		3790
Total	39776	57392	36409	40748	77369	79210	100015	95785	58858	60741	46236	55647
Avg	1283	2050	1174	1358	2496	2640	3226	3090	1962	1959	1541	1795
High	2175	8413	2239	5260	6667	4335	4916	4576	3192	6153	2408	4454
Low	0	0	28	0	0	1516	1124	1722	1025	645	819	963

All flows are in cubic meters

2010 Maximum Raw Daily Flow Rates Expressed as a Percentage of Capacity (13,536 m³ in Certificate of Approval)

	Jan	% of Flow	Feb	% of Flow	Mar	% of Flow	Apr	% of Flow	May	% of Flow	Jun	% of Flow	Jul	% of Flow	Aug	% of Flow	Sep	% of Flow	Oct	% of Flow	Nov	% of Flow	Dec	% of Flow
1st	1918	14.17	1011	7.47	1395	10.31	1943	14.35	2102	15.53	2970	21.94	2898	21.41	4576	33.81	3192	23.58	2403	17.75	1923	14.21	4454	32.90
2nd	2034	15.03	1158	8.55	1702	12.57	384	2.84	1366	10.09	4195	30.99	4134	30.54	3619	26.74	2330	17.21	1653	12.21	1167	8.62	1329	9.82
3rd	1709	12.63	1453	10.73	1249	9.23	1401	10.35	1564	11.55	2766	20.43	4542	33.55	2993	22.11	1829	13.51	1730	12.78	1136	8.39	963	7.11
4th	1069	7.90	0	0.00	1595	11.78	1366	10.09	1802	13.31	4335	32.03	3555	26.26	4179	30.87	2131	15.74	1942	14.35	1750	12.93	1239	9.15
5th	989	7.31	1325	9.79	2043	15.09	617	4.56	2614	19.31	2738	20.23	4130	30.51	2557	18.89	3055	22.57	1728	12.77	2204	16.28	1009	7.45
6th	1262	9.32	2583	19.08	1021	7.54	1533	11.33	0	0.00	1836	13.56	4812	35.55	4526	33.44	2571	18.99	2279	16.84	1432	10.58	1115	8.24
7th	0	0.00	8413	62.15	2239	16.54	1132	8.36	1325	9.79	3377	24.95	4671	34.51	3236	23.91	2197	16.23	1769	13.07	1516	11.20	1459	10.78
8th	1543	11.40	1131	8.36	1625	12.01	1289	9.52	1164	8.60	2760	20.39	3164	23.37	3522	26.02	1487	10.99	1714	12.66	1546	11.42	1589	11.74
9th	1173	8.67	1103	8.15	1201	8.87	638	4.71	1144	8.45	2424	17.91	3877	28.64	2250	16.62	1637	12.09	1444	10.67	1791	13.23	1800	13.30
10th	1218	9.00	927	6.85	1136	8.39	1622	11.98	2101	15.52	3090	22.83	4419	32.65	2452	18.11	2906	21.47	1925	14.22	819	6.05	1534	11.33
11th	362	2.67	2578	19.05	1270	9.38	1259	9.30	901	6.66	2723	20.12	2881	21.28	2884	21.31	1413	10.44	2546	18.81	1054	7.79	1648	12.17
12th	952	7.03	3459	25.55	1812	13.39	1571	11.61	1779	13.14	2459	18.17	2932	21.66	2995	22.13	1034	7.64	2332	17.23	1400	10.34	1545	11.41
13th	1514	11.18	2643	19.53	1259	9.30	1271	9.39	1680	12.41	2309	17.06	2810	20.76	3812	28.16	2093	15.46	6153	45.46	1302	9.62	1301	9.61
14th	0	0.00	2263	16.72	1252	9.25	501	3.70	1677	12.39	2462	18.19	3142	23.21	3225	23.83	1736	12.83	2667	19.70	1536	11.35	1772	13.09
15th	1286	9.50	1936	14.30	1433	10.59	682	5.04	1116	8.24	2201	16.26	3512	25.95	2999	22.16	2703	19.97	2798	20.67	1602	11.84	1587	11.72
16th	1399	10.34	1788	13.21	1080	7.98	1694	12.51	2104	15.54	2250	16.62	2417	17.86	2958	21.85	1163	8.59	1236	9.13	2322	17.15	1574	11.63
17th	1800	13.30	1271	9.39	550	4.06	678	5.01	1945	14.37	2606	19.25	3280	24.23	3552	26.24	2814	20.79	1800	13.30	1762	13.02	1728	12.77
18th	1151	8.50	1737	12.83	766	5.66	1267	9.36	1687	12.46	2472	18.26	2671	19.73	3024	22.34	1927	14.24	1849	13.66	1302	9.62	1143	8.44
19th	1968	14.54	1390	10.27	1745	12.89	1228	9.07	1927	14.24	2866	21.17	1764	13.03	2983	22.04	1808	13.36	1349	9.97	1771	13.08	1013	7.48
20th	790	5.84	5247	38.76	1106	8.17	5260	38.86	526	3.89	3832	28.31	3896	28.78	2798	20.67	1990	14.70	1681	12.42	1330	9.83	1946	14.38
21st	1808	13.36	2956	21.84	938	6.93	938	6.93	954	7.05	2419	17.87	1124	8.30	2648	19.56	2299	16.98	1511	11.16	1205	8.90	1649	12.18
22nd	1220	9.01	1712	12.65	929	6.86	983	7.26	2383	17.60	1872	13.83	4916	36.32	2865	21.17	1890	13.96	1551	11.46	1679	12.40	1840	13.59
23rd	1570	11.60	1467	10.84	97	0.72	2068	15.28	5935	43.85	2215	16.36	3277	24.21	1722	12.72	1025	7.57	2015	14.89	1750	12.93	2461	18.18
24th	1843	13.62	770	5.69	920	6.80	1562	11.54	6244	46.13	1938	14.32	2126	15.71	2928	21.63	1325	9.79	1187	8.77	1315	9.71	2066	15.26
25th	739	5.46	1890	13.96	606	4.48	1313	9.70	6667	49.25	2649	19.57	3041	22.47	2440	18.03	1786	13.19	1624	12.00	1262	9.32	1090	8.05
26th	0	0.00	1315	9.71	844	6.24	1136	8.39	4847	35.81	2328	17.20	1751	12.94	2567	18.96	1774	13.11	2549	18.83	2408	17.79	1414	10.45
27th	2175	16.07	2203	16.28	981	7.25	1670	12.34	5524	40.81	3365	24.86	3724	27.51	2599	19.20	1486	10.98	1079	7.97	1123	8.30	1443	10.66
28th	760	5.61	1663	12.29	512	3.78	1625	12.01	4053	29.94	1516	11.20	1863	13.76	3303	24.40	1468	10.85	2421	17.89	1105	8.16	2578	19.05
29th	1853	13.69			1630	12.04	0	0.00	4564	33.72	2036	15.04	2131	15.74	3925	29.00	1534	11.33	1883	13.91	2352	17.38	2901	21.43
30th	1811	13.38			28	0.21	2117	15.64	2627	19.41	2201	16.26	3838	28.35	3221	23.80	2255	16.66	1278	9.44	1372	10.14	2667	19.70
31st	1860	13.74			1445	10.68			3047	22.51			2717	20.07	2427	17.93			645	4.77			3790	28.00

Avg	1283		2050		1174		1358		2496		2640		3226		3090		1962		1959		1541		1795
High	2175		8413		2239		5260		6667		4335		4916		4576		3192		6153		2408		4454
Low	0		0		28		0		0		1516		1124		1722		1025		645		819		963

All flows are in cubic metres



ANNUAL REPORT TEMPLATE

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
Period being reported:	January 1, 2010 – December 31, 2010

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [X] No []</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> <p>Town of The Blue Mountains, Municipal Office – 26 Bridge Street E, Thornbury Town Website www.thebluemountains.ca</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input type="text"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to: <input type="text"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>
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List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?
Yes [] No [X]



Indicate how you notified system users that your annual report is available, and is free of charge.

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method _____

Describe your Drinking-Water System

The Thornbury Water Treatment Plant is located at 230 Peel Street. Our water source is Georgian Bay, part of the Great Lakes Water System.

A 472 m long, 600 mm diameter raw water intake pipe extends approximately 430 meters into Georgian Bay. Zebra mussel control consists of a 38 mm diameter chlorine feed line and a chlorine solution diffuser (pre-chlorination). Raw water sampling is accomplished by utilizing a 25 mm diameter sampling line which extends out from the intake bell.

After entering the intake, three (3) low lift vertical turbine pumps (2 duty, 1 standby) deliver the raw water to two (2) 0.30 mm strainers before it is directed to the microfiltration units.

The microfiltration units consist of three (3) trains of 240 microfiltration modules (80 modules per train) complete with three (3) valve tracks and controls. The microfiltration units filter the raw water by forcing it through 0.1 µm sized membranes.

Two (2) reverse filtration pumps (1 duty, 1 standby) are used to backwash the microfiltration units into the Modified Reverse Filtration Filter. The modified reverse filtration filter (modified original mixed media filter) is isolated from the potable water system and is used to filter the reverse filtration water from the microfiltration units and the backflush discharge from the strainers. This waste filtrate water is monitored for chlorine residual and chemically de-chlorinated before being discharging into the Little Beaver River.

After being filtered, the treated water is discharged into a common header where it is chlorinated (post-chlorination) prior to being discharged into the clearwell. From the clearwell, the treated water is drawn by the three (3) vertical turbine pumps (2 duty, 1 standby) and pumped through the ultraviolet disinfection system. The ultraviolet system consists of three (3) Trojan UV Reactors (2 duty, 1 standby) which provide 100% treatment capacity prior to delivery to the Town's distribution system. Ultraviolet is the method of disinfection in which ultraviolet irradiation is used to inactivate target organisms in the water source and is the primary disinfection used at the Thornbury WTP.

Control of the high lift pumps is via water level in the 747 m³ elevated storage tank located on Victoria Street in Thornbury.



The distribution system consists of approximately 120 kilometers of watermain ranging in size from 50 mm to 400 mm. Distribution facilities consist of an elevated tank, 6 booster stations, 2 in-ground reservoirs complete with booster stations, 2 above ground reservoirs and 1 standpipe.

Thornbury Water Tower

An elevated storage tank is located on Victoria Street in Thornbury and is referred to as the Thornbury Water Tower. This Tower has a capacity of 747 m³. The Tower level supplies water pressure to the 10th Line Booster Station, Thornbury Reservoir, Camperdown Court Booster Station and Arrowhead Road Booster Station.

10th Line Booster Station

A booster station and re-chlorination facility is located at the 10th Concession and Highway No. 26 and is referred to as the 10th Line Booster Station. The water pressure at this station is boosted for higher distribution pressures and volume to provide fire flows throughout the Lora Bay Service Area. The firm capacity at this station is 66.67 l/s. 100% standby power is available at this station.

Thornbury Reservoir

A treated water reservoir, booster station and re-chlorination facility is located at 1 Grey Street South, Unit 1 in Thornbury and is referred to as the Thornbury Reservoir. The Thornbury Reservoir is equipped with three centrifugal pumps, re-chlorination equipment and 100% standby power. The firm capacity at this station is 150 l/s.

Camperdown Reservoir

A treated water reservoir, pumphouse and re-chlorination facility is located at 109 Camperdown Road and is referred to as the Camperdown Reservoir. This in-ground reservoir and booster station is equipped with two centrifugal operating pumps, one centrifugal fire pump, re-chlorination equipped and 100% standby power. The firm capacity to the upper zone is 12.3 l/s.

Camperdown Court Booster Station

A booster pumping station is located at 103 Camperdown Court and is referred to as the Camperdown Court Booster Station. This booster station is equipped with two centrifugal pumps with standby power supplied by the Camperdown Reservoir. The firm capacity at this station is 85 l/s.

Wards Road Booster Station

A booster station is located at 153 Wards Road and is referred to as the Wards Road Booster Station. This booster station is equipped with two centrifugal pumps. The firm capacity at this station is 16 l/s. This station is equipped with 100% standby power.



Arrowhead Road Booster Station

A booster station is located at 122 Arrowhead Road and is referred to as the Arrowhead Road Booster Station. This station is equipped with three vertical turbine pumps, re-chlorination equipment and 40% standby power. Provisions were made through piping and valving to reverse the flow of water from the Craigeith Service Area to the Camperdown and Thornbury Service Areas. The firm capacity at this station is 40 l/s.

Happy Valley Reservoirs

Two reservoirs are located at 136 Happy Valley Road and are referred to as the Happy Valley Road Reservoirs. These reservoirs have a combined capacity of 5,000 m³.

Happy Valley Road Booster Station

A booster pumping station is also located at 136 Happy Valley Road and is referred to as the Happy Valley Road Booster Station. This station is equipped with two pumps and re-chlorination equipment. The firm capacity at this station is 5.35 l/s.

Swiss Meadows Standpipe

A 536 m³ standpipe is located at 154 Scandia Lane above the Swiss Meadows subdivision.

Mountain Road Booster Station

A booster pumping station is located at 795930 at the intersection of Grey Road 19 and Grey Road 21 and is referred to as the Mountain Road Booster Station. This station is equipped with two in-line water booster pumps and re-chlorination equipment and has a firm capacity of 46 l/s. In 2010, the water received at this station from the Town of Collingwood was 4,000 m³/day.

List all water treatment chemicals used over this reporting period

Chlorine (liquefied gas)
Sodium Hypochlorite (12%)
Citric Acid
Sodium Hydroxide
Calcium Thiosulphate

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment



Please provide a brief description and a breakdown of monetary expenses incurred

Reservoir Inspections

Inspection of Camperdown Reservoir and Thornbury Reservoir to determine the structural condition of both reservoirs and to determine the cleanliness and all associated components inside each reservoir

Expended this year: \$10,400

Water Modeling & Distribution Analysis

Engineering services relating to the preparation of a Calibrated Hydraulic Water Model of the Town's existing water distribution system

Expended this year: \$151,718

Camperdown Reservoir Water Pipe Replacement

Installation of water piping in reservoir pump house

Expended this year: \$13,500

Plan 915 Watermains

The replacement and commissioning of approximately 795 meters of 150mm watermain and 70 meters of 200mm watermain

Expended this year: \$281,912

Thornbury WTP & Related SCADA

Purchase of Programmable Logic Control (PLC) parts and Pall backup computer replacement

Expended this year: \$16,408

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
March 8, 2010	Total Coliform	1	CFU/100 mL	Re-sample/Re-test, Flushing	March 11, 2010
March 10, 2010	Total Coliform	1	CFU/100 mL	Re-sample/Re-test, Flushing	March 11, 2010

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.



	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	52	0 – 9	0 – 89	37	0 to >2000
Treated	52	0	0	52	0 to 3
Distribution	558	0	0 – 1	420	0 to 660

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity		
Rack 1	8760	0.034 to 0.989 NTU
Rack 2	8760	0.032 to 0.989 NTU
Rack 3	8760	0.011 to 0.990 NTU
Chlorine		
Finish	8760	0.85 to 1.42 mg/L
Thornbury Reservoir	8760	0.83 to 2.00 mg/L
10th Line Booster Station	8760	0.84 to 2.50 mg/L
Arrowhead Road Booster Station	8760	0.41 to 1.63 mg/L
Arrowhead Road Booster Station By-pass	8472	0.67 to 2.50 mg/L
Happy Valley Booster Station	8760	0.70 to 2.50 mg/L
Camperdown Reservoir	8760	0.67 to 2.50 mg/L
Mountain Road Booster Station	8760	0.95 to 2.48 mg/L
Distribution	5585	0.05 to 1.93 mg/L
Fluoride (If the DWS provides fluoridation)		

NOTE: For continuous monitors use 8760 as the number of samples.

NOTE: Record the unit of measure if it is not milligrams per litre.

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.



Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
Certificate of Approval – March 24, 2010	Suspended Solids			

**** Please see attached additional sampling results for Trihalomethanes, Clostridium, Process Wastewater Total Suspended Solids, Nitrate and Nitrite**

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	March 29, 2010	0.09	ug/L	No
Arsenic	March 29, 2010	0.4	ug/L	No
Barium	March 29, 2010	13.0	ug/L	No
Boron	March 29, 2010	10.8	ug/L	No
Cadmium	March 29, 2010	0.003	ug/L	No
Chromium	March 29, 2010	0.5	ug/L	No
*Lead				
Mercury	March 29, 2010	0.02	ug/L	No
Selenium	March 29, 2010	1	ug/L	No
Sodium	April 7, 2008	4.0	ug/L	No
Uranium	March 29, 2010	0.159	ug/L	No
Fluoride	March 29, 2010	0.08	mg/L	No
Nitrite	Dec 7, 2010	0.005	ug/L	No
Nitrate	Dec 7, 2010	0.290	ug/L	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing			
Distribution			

**** The Town qualified for reduced lead sampling and frequency and as such samples were not collected during the 2010 reporting period.**

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	March 29, 2010	0.02	ug/L	No
Aldicarb	March 29, 2010	0.01	ug/L	No
Aldrin + Dieldrin	March 29, 2010	0.01	ug/L	No
Atrazine + N-dealkylated metabolites	March 29, 2010	0.01	ug/L	No
Azinphos-methyl	March 29, 2010	0.02	ug/L	No
Bendiocarb	March 29, 2010	0.01	ug/L	No
Benzene	March 29, 2010	0.32	ug/L	No
Benzo(a)pyrene	March 29, 2010	0.004	ug/L	No
Bromoxynil	March 29, 2010	0.33	ug/L	No
Carbaryl	March 29, 2010	0.01	ug/L	No
Carbofuran	March 29, 2010	0.01	ug/L	No
Carbon Tetrachloride	March 29, 2010	0.16	ug/L	No
Chlordane (Total)	March 29, 2010	0.01	ug/L	No
Chlorpyrifos	March 29, 2010	0.02	ug/L	No
Cyanazine	March 29, 2010	0.03	ug/L	No
Diazinon	March 29, 2010	0.02	ug/L	No
Dicamba	March 29, 2010	0.20	ug/L	No
1,2-Dichlorobenzene	March 29, 2010	0.41	ug/L	No
1,4-Dichlorobenzene	March 29, 2010	0.36	ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	March 29, 2010	0.01	ug/L	No
1,2-Dichloroethane	March 29, 2010	0.35	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	March 29, 2010	0.33	ug/L	No
Dichloromethane	March 29, 2010	0.35	ug/L	No
2-4 Dichlorophenol	March 29, 2010	0.15	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	March 29, 2010	0.19	ug/L	No
Diclofop-methyl	March 29, 2010	0.40	ug/L	No
Dimethoate	March 29, 2010	0.03	ug/L	No
Dinoseb	March 29, 2010	0.36	ug/L	No
Diquat	March 29, 2010	1	ug/L	No
Diuron	March 29, 2010	0.03	ug/L	No
Glyphosate	March 29, 2010	6	ug/L	No
Heptachlor + Heptachlor Epoxide	March 29, 2010	0.01	ug/L	No
Lindane (Total)	March 29, 2010	0.01	ug/L	No
Malathion	March 29, 2010	0.02	ug/L	No
Methoxychlor	March 29, 2010	0.01	ug/L	No
Metolachlor	March 29, 2010	0.01	ug/L	No
Metribuzin	March 29, 2010	0.02	ug/L	No
Monochlorobenzene	March 29, 2010	0.30	ug/L	No
Paraquat	March 29, 2010	1	ug/L	No
Parathion	March 29, 2010	0.02	ug/L	No
Pentachlorophenol	March 29, 2010	0.15	ug/L	No



Phorate	March 29, 2010	0.01	ug/L	No
Picloram	March 29, 2010	0.25	ug/L	No
Polychlorinated Biphenyls(PCB)	March 29, 2010	0.04	ug/L	No
Prometryne	March 29, 2010	0.03	ug/L	No
Simazine	March 29, 2010	0.01	ug/L	No
THM (NOTE: show latest annual average)	January 5 to December 7, 2010	41	ug/L	No
Temephos	March 29, 2010	0.01	ug/L	No
Terbufos	March 29, 2010	0.01	ug/L	No
Tetrachloroethylene	March 29, 2010	0.35	ug/L	No
2,3,4,6-Tetrachlorophenol	March 29, 2010	0.14	ug/L	No
Triallate	March 29, 2010	0.01	ug/L	No
Trichloroethylene	March 29, 2010	0.43	ug/L	No
2,4,6-Trichlorophenol	March 29, 2010	0.25	ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	March 29, 2010	0.22	ug/L	No
Trifluralin	March 29, 2010	0.02	ug/L	No
Vinyl Chloride	March 29, 2010	0.17	ug/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
Trihalomethanes	54	ug/L	May 3, 2010
Trihalomethanes	50	ug/L	June 7, 2010
Trihalomethanes	53	ug/L	July 5, 2010
Trihalomethanes	51	ug/L	August 3, 2010
Trihalomethanes	56	ug/L	September 7, 2010
Trihalomethanes	59	ug/L	October 4, 2010
Trihalomethanes	51	ug/L	December 7, 2010



Summary of Additional Sampling Results - 2010

Sample for: **Clostridium - Raw (CFU/L)**

Month	# of Samples	Location	Results / Range
January 4	1	Thornbury WTP	0
February 1	1	Thornbury WTP	0
March 1	1	Thornbury WTP	0
April 6	1	Thornbury WTP	0
May 3	1	Thornbury WTP	0
June 7	1	Thornbury WTP	0
July 5	1	Thornbury WTP	0
August 3	1	Thornbury WTP	0
September 7	1	Thornbury WTP	0
October 4	1	Thornbury WTP	0
November 1	1	Thornbury WTP	0
December 7	1	Thornbury WTP	20

Sample for: **Trihalomethanes - Treated (ug/L)**

Month	# of Samples	Location	Results / Range
January 4	1	Happy Valley Booster Station	19
January 4	1	Swiss Meadows Hut	28
February 1	1	Happy Valley Booster Station	14
February 1	1	Swiss Meadows Standpipe	22
March 1	1	Happy Valley Booster Station	28
March 1	1	Swiss Meadows Hut	25
April 6	1	Patricia Drive SS (020)	35
April 6	1	Swiss Meadows Standpipe	35
May 3	1	Patricia Drive SS (020)	35
May 3	1	Swiss Meadows Standpipe	54
June 7	1	Patricia Drive SS (020)	41
June 7	1	Swiss Meadows Scandia SS (022)	50
July 5	1	Patricia Drive SS (020)	47
July 5	1	Swiss Meadows Standpipe	53
August 3	1	Arlberg Crescent SS (017)	51
August 3	1	Swiss Meadows Maple SS (023)	38
September 7	1	Arlberg Crescent SS (017)	46
September 7	1	Swiss Meadows Maple SS (023)	56
October 4	1	Patricia Drive SS (020)	46
October 4	1	Swiss Meadows Standpipe	59
November 1	1	Arlberg Crescent SS (017)	44
November 1	1	Swiss Meadows Standpipe	47
December 7	1	Camperdown Reservoir	51
December 7	1	Swiss Meadows Standpipe	48
		Annual Average	41

Sample for: **Process Waste Water Total Suspended Solids (mg/L)**

Month		# of Samples	Results / Range
January	Lakefield Lab	1	14
February	Lakefield Lab	1	3
March	Lakefield Lab	1	6
April	Lakefield Lab	1	<2
May	Lakefield Lab	1	<2
June	Lakefield Lab	1	2
July	Lakefield Lab	1	2
August	Lakefield Lab	1	<2
September	Lakefield Lab	1	2
October	Lakefield Lab	1	4
November	Lakefield Lab	1	3
December	Lakefield Lab	1	8

Sample for: **Nitrate - Raw & Treated (mg/L)**

Month	# of Samples	Location	Results / Range
January 4	1	Thornbury WTP - Treated	0.298
January 4	1	Thornbury WTP - Raw	0.300
January 4	1	Little Beaver	0.855
January 4	1	Big Head River	0.859
January 4	1	Beaver River	1.000
February 1	1	Thornbury WTP Raw	0.303
February 1	1	Little Beaver	0.970
February 1	1	Thornbury WTP - Treated	0.309
March 1	1	Thornbury WTP Raw	0.291
March 1	1	Thornbury WTP - Treated	0.310
April 6	1	Thornbury WTP - Treated	0.295
April 6	1	Thornbury WTP Raw	0.289
April 6	1	Little Beaver	0.578
April 6	1	Big Head River	0.713
April 6	1	Beaver River	0.293
May 3	1	Thornbury WTP Raw	0.286
May 3	1	Little Beaver	0.518
May 3	1	Big Head River	0.521
May 3	1	Beaver River	0.325
May 3	1	Thornbury WTP - Treated	0.288
June 7	1	Thornbury WTP Raw	0.267
June 7	1	Little Beaver	1.08
June 7	1	Big Head River	0.547
June 7	1	Beaver River	0.251
June 7	1	Thornbury WTP - Treated	0.013
July 5	1	Thornbury WTP - Treated	0.298
July 5	1	Thornbury WTP - Raw	0.294
July 5	1	Little Beaver	0.303
July 5	1	Big Head River	0.182
July 5	1	Beaver River	0.182

August 3	1	Thornbury WTP - Treated	0.013
August 3	1	Thornbury WTP Raw	0.262
August 3	1	Little Beaver	0.149
August 3	1	Big Head River	0.122
August 3	1	Beaver River	0.013
September 7	1	Thornbury WTP - Treated	0.264
September 7	1	Thornbury WTP - Raw	0.247
September 7	1	Little Beaver	0.065
September 7	1	Big Head River	0.148
September 7	1	Beaver River	0.013
September 7	1	Indian Brook	0.181
October 4	1	Thornbury WTP - Treated	0.257
October 4	1	Thornbury WTP - Raw	0.261
October 4	1	Little Beaver	1.230
October 4	1	Big Head River	0.256
October 4	1	Beaver River	0.039
October 4	1	Indian Brook	1.210
November 1	1	Thornbury WTP - Raw	0.260
November 1	1	Little Beaver	0.996
November 1	1	Big Head River	0.325
November 1	1	Beaver River	1.000
November 1	1	Indian Brook	0.999
November 1	1	Thornbury WTP - Treated	0.267
December 7	1	Thornbury WTP - Treated	0.290
December 7	1	Thornbury WTP - Raw	0.283
December 7	1	Little Beaver	1.48
December 7	1	Beaver River	0.525
December 7	1	Indian Brook	2.24

Sample for: Nitrite - Raw & Treated (mg/L)

Month	# of Samples	Location	Results / Range
January 4	1	Thornbury WTP - Treated	0.005
January 4	1	Thornbury WTP - Raw	0.005
January 4	1	Little Beaver	0.005
January 4	1	Big Head River	0.005
January 4	1	Beaver River	0.013
February 1	1	Thornbury WTP Raw	0.005
February 1	1	Little Beaver	0.005
February 1	1	Thornbury WTP - Treated	0.005
March 1	1	Thornbury WTP Raw	0.005
March 1	1	Thornbury WTP - Treated	0.005
April 6	1	Thornbury WTP - Treated	0.005
April 6	1	Thornbury WTP Raw	0.005
April 6	1	Little Beaver	0.005
April 6	1	Big Head River	0.005
April 6	1	Beaver River	0.005
May 3	1	Thornbury WTP Raw	0.005
May 3	1	Little Beaver	0.005
May 3	1	Big Head River	0.005
May 3	1	Beaver River	0.005

May 3	1	Thornbury WTP - Treated	0.005
June 7	1	Thornbury WTP Raw	0.005
June 7	1	Little Beaver	0.005
June 7	1	Big Head River	0.005
June 7	1	Beaver River	0.005
June 7	1	Thornbury WTP - Treated	0.005
July 5	1	Thornbury WTP - Treated	0.005
July 5	1	Thornbury WTP - Raw	0.005
July 5	1	Little Beaver	0.005
July 5	1	Big Head River	0.005
July 5	1	Beaver River	0.005
August 3	1	Thornbury WTP - Treated	0.005
August 3	1	Thornbury WTP Raw	0.005
August 3	1	Little Beaver	0.005
August 3	1	Big Head River	0.005
August 3	1	Beaver River	0.005
September 7	1	Thornbury WTP - Treated	0.005
September 7	1	Thornbury WTP - Raw	0.005
September 7	1	Little Beaver	0.005
September 7	1	Big Head River	0.005
September 7	1	Beaver River	0.005
September 7	1	Indian Brook	0.005
October 4	1	Thornbury WTP - Treated	0.005
October 4	1	Thornbury WTP - Raw	0.005
October 4	1	Little Beaver	0.005
October 4	1	Big Head River	0.005
October 4	1	Beaver River	0.005
October 4	1	Indian Brook	0.005
November 1	1	Thornbury WTP - Raw	0.005
November 1	1	Little Beaver	0.005
November 1	1	Big Head River	0.005
November 1	1	Beaver River	0.005
November 1	1	Indian Brook	0.005
November 1	1	Thornbury WTP - Treated	0.005
December 7	1	Thornbury WTP - Treated	0.005
December 7	1	Thornbury WTP - Raw	0.005
December 7	1	Little Beaver	0.005
December 7	1	Beaver River	0.005
December 7	1	Indian Brook	0.005

Ministry of the Environment
Southwestern Region
Technical Support Section
Water Resources
733 Exeter Rd
London ON N6E 1L3
Fax: (519)873-5020
Tel: (519) 873-5066

Ministère de l'Environnement
Direction régionale du Sud-Ouest
Section du Soutien Technique
Ressource en eau
733 Exeter Rd
London ON N6E 1L3
Télécopieur: (519)873-5020
Tél:(519) 873-5066



April 28, 2008

The Corporation of the Town of The Blue Mountains
26 Bridge St E P.O. Box 310
Thornbury, Ontario, N0H 2P0

RE: Permit o. 4176-7DJJZG
Lot: 34, Concession: 10 (Thornbury)
The Blue Mountains, County of Grey
Reference Number 7255-7DHQFP

RECEIVED
MAY 07 2008
TOWN OF THE BLUE MOUNTAINS
RECEIVED

MAY 08 2008
ENGINEERING & PUBLIC WORKS
TOWN OF THE BLUE MOUNTAINS

Dear Mr. Casivell:

Please find attached a Permit to Take Water which authorizes the withdrawal of water in accordance with the application for this Permit to Take Water, dated January 30, 2008 and signed by John Casivell.

The Water Taking and Transfer Regulation, O. Reg. 387/04 came into effect on January 1, 2005. It requires that permit holders track the volume of water they take daily and report these volumes to the Ministry the following year. Please ensure that you inform yourself of the monitoring and reporting requirements related to your permit. You can find additional information on the MOE web site at www.ene.gov.on.ca or by calling the nearest MOE office.

Take notice that in issuing this Permit to Take Water, terms and conditions pertaining to the taking of water and to the results of the taking have been imposed. The terms and conditions have been designed to allow for the development of water resources, while providing reasonable protection to existing water uses and users.

Yours truly,

Ian Kerr
Supervisor, Water Resources
Southwestern Region

File Storage Number: SIGRBMC10.220

AMENDED PERMIT TO TAKE WATER
Surface Water
NUMBER 4176-7DJJZG

Pursuant to Section 34 of the Ontario Water Resources Act, R.S.O. 1990 this Permit To Take Water is hereby issued to:

The Corporation of the Town of The Blue Mountains
26 Bridge St E P.O. Box 310
Thornbury, Ontario, N0H 2P0
Canada

For the water taking from: Georgian Bay

Located at: Lot 34, Concession 10 (Thornbury)
The Blue Mountains, County of Grey

For the purposes of this Permit, and the terms and conditions specified below, the following definitions apply:

DEFINITIONS

- (a) "Director" means any person appointed in writing as a Director pursuant to section 5 of the OWRA for the purposes of section 34, OWRA.
- (b) "Provincial Officer" means any person designated in writing by the Minister as a Provincial Officer pursuant to section 5 of the OWRA.
- (c) "Ministry" means Ontario Ministry of the Environment.
- (d) "District Office" means the Owen Sound District Office.
- (e) "Permit" means this Permit to Take Water No. 4176-7DJJZG including its Schedules, if any, issued in accordance with Section 34 of the OWRA.
- (f) "Permit Holder" means The Corporation of the Town of The Blue Mountains.
- (g) "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O. 40, as amended.

You are hereby notified that this Permit is issued subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. Compliance with Permit

- 1.1 Except where modified by this Permit, the water taking shall be in accordance with the application for this Permit To Take Water, dated January 30, 2008 and signed by John Caswell, and all Schedules included in this Permit.
- 1.2 The Permit Holder shall ensure that any person authorized by the Permit Holder to take water under this Permit is provided with a copy of this Permit and shall take all reasonable measures to ensure that any such person complies with the conditions of this Permit.
- 1.3 Any person authorized by the Permit Holder to take water under this Permit shall comply with the conditions of this Permit.
- 1.4 This Permit is not transferable to another person.
- 1.5 This Permit provides the Permit Holder with permission to take water in accordance with the conditions of this Permit, up to the date of the expiry of this Permit. This Permit does not constitute a legal right, vested or otherwise, to a water allocation, and the issuance of this Permit does not guarantee that, upon its expiry, it will be renewed.
- 1.6 The Permit Holder shall keep this Permit available at all times at or near the site of the taking, and shall produce this Permit immediately for inspection by a Provincial Officer upon his or her request.
- 1.7 The Permit Holder shall report any changes of address to the Director within thirty days of any such change. The Permit Holder shall report any change of ownership of the property for which this Permit is issued within thirty days of any such change. A change in ownership in the property shall cause this Permit to be cancelled.

2. General Conditions and Interpretation

- 2.1 Inspections
The Permit Holder must forthwith, upon presentation of credentials, permit a Provincial Officer to carry out any and all inspections authorized by the OWRA, the *Environmental Protection Act*, R.S.O. 1990, the *Pesticides Act*, R.S.O. 1990, or the *Safe Drinking Water Act*, S. O. 2002.
- 2.2 Other Approvals
The issuance of, and compliance with this Permit, does not:
 - (a) relieve the Permit Holder or any other person from any obligation to comply with any other applicable legal requirements, including the provisions of the *Ontario Water Resources Act*, and

the *Environmental Protection Act*, and any regulations made thereunder; or

(b) limit in any way any authority of the Ministry, a Director, or a Provincial Officer, including the authority to require certain steps be taken or to require the Permit Holder to furnish any further information related to this Permit.

2.3 Information

The receipt of any information by the Ministry, the failure of the Ministry to take any action or require any person to take any action in relation to the information, or the failure of a Provincial Officer to prosecute any person in relation to the information, shall not be construed as:

(a) an approval, waiver or justification by the Ministry of any act or omission of any person that contravenes this Permit or other legal requirement; or

(b) acceptance by the Ministry of the information's completeness or accuracy.

2.4 Rights of Action

The issuance of, and compliance with this Permit shall not be construed as precluding or limiting any legal claims or rights of action that any person, including the Crown in right of Ontario or any agency thereof, has or may have against the Permit Holder, its officers, employees, agents, and contractors.

2.5 Severability

The requirements of this Permit are severable. If any requirements of this Permit, or the application of any requirements of this Permit to any circumstance, is held invalid or unenforceable, the application of such requirements to other circumstances and the remainder of this Permit shall not be affected thereby.

2.6 Conflicts

Where there is a conflict between a provision of any submitted document referred to in this Permit, including its Schedules, and the conditions of this Permit, the conditions in this Permit shall take precedence.

3. **Water Takings Authorized by This Permit**

3.1 **Expiry**

This Permit expires on **August 31, 2012**. No water shall be taken under authority of this Permit after the expiry date.

3.2 Amounts of Taking Permitted

The Permit Holder shall only take water from the source, during the periods and at the rates and amounts of taking specified in Table A. Water takings are authorized only for the purposes specified in Table A.

Table A

	Source Name / Description:	Source Type:	Taking Specific Purpose:	Taking Major Category:	Max Taken per Minute (litres):	Max Num of Hrs Taken per Day:	Max Taken per Day (litres):	Max Num of Days Taken per Year:	Zone/Easting/Northing:
1	Georgian Bay	Lake	Municipal	Water Supply	14,400	24	18,662,400	365	17 543360 4935450
						Total Taking:	18,662,400		

3.3 Any application submitted to the Ministry for renewal or amendment of this Permit shall be accompanied by all records required by the conditions of this Permit

4. Monitoring

4.1 The Permit Holder shall maintain a record of all water takings. This record shall include the dates and times of water takings, and the total measured amounts of water pumped per day for each day that water is taken under the authorization of this Permit. A separate record shall be maintained for each source. The Permit Holder shall keep all required records up to date and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request. The total amounts of water pumped shall be measured using a flow measuring device.

5. Impacts of the Water Taking

5.1 Notification

The Permit Holder shall immediately notify the local District Office of any complaint arising from the taking of water authorized under this Permit and shall report any action which has been taken or is proposed with regard to such complaint. The Permit Holder shall immediately notify the local District Office if the taking of water is observed to have any significant impact on the surrounding waters. After hours, calls shall be directed to the Ministry's Spills Action Centre at 1-800-268-6060.

5.2 For Surface-Water Takings

The taking of water (including the taking of water into storage and the subsequent or simultaneous withdrawal from storage) shall be carried out in such a manner that streamflow is not stopped and is not reduced to a rate that will cause interference with downstream uses of water or with the natural functions of the stream.

6. Director May Amend Permit

The Director may amend this Permit by letter requiring the Permit Holder to suspend or reduce

the taking to an amount or threshold specified by the Director in the letter. The suspension or reduction in taking shall be effective immediately and may be revoked at any time upon notification by the Director. This condition does not affect your right to appeal the suspension or reduction in taking to the Environmental Review Tribunal under the *Ontario Water Resources Act*, Section 100 (4).

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is included to ensure that the conditions in this Permit are complied with and can be enforced.
2. Condition 2 is included to clarify the legal interpretation of aspects of this Permit.
3. Conditions 3 through 6 are included to protect the quality of the natural environment so as to safeguard the ecosystem and human health and foster efficient use and conservation of waters. These conditions allow for the beneficial use of waters while ensuring the fair sharing, conservation and sustainable use of the waters of Ontario. The conditions also specify the water takings that are authorized by this Permit and the scope of this Permit.

In accordance with Section 100 of the Ontario Water Resources Act, R.S.O. 1990, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 101 of the Ontario Water Resources Act, R.S.O. 1990, as amended, provides that the Notice requiring the hearing shall state:

1. The portions of the Permit or each term or condition in the Permit in respect of which the hearing is required, and;
2. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

In addition to these legal requirements, the Notice should also include:

3. The name of the appellant;
4. The address of the appellant;
5. The Permit to Take Water number;
6. The date of the Permit to Take Water;
7. The name of the Director;
8. The municipality within which the works are located;

This notice must be served upon:

*The Secretary
Environmental Review Tribunal
655 Bay Street, 15th Floor
Toronto ON
M5G 1E5*

AND

*The Director, Section 34
Ministry of the Environment
733 Exeter Rd
London ON N6E 1L3
Fax: (519)873-5020*

Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal:

by telephone at (416) 314-4600

by fax at (416) 314-4506

by e-mail at www.ert.gov.on.ca

This Permit cancels and replaces Permit Number 2612-7BZKKS, issued on 2008/02/21.

Dated at London this 28th day of April, 2008.



Ian Kerr
Director, Section 34
Ontario Water Resources Act, R.S.O. 1990

Schedule A

This Schedule "A" forms part of Permit To Take Water 4176-7DJJZG, dated April 28, 2008.