

STAFF REPORT: Engineering and Public Works Department



REPORT TO: Infrastructure and Recreation Committee
MEETING DATE: June 9, 2009
REPORT NO.: EPW.09.050
SUBJECT: Endorsement of the Operational Plan
 prepared for the Thornbury Water
 Treatment Plant and Distribution System

PREPARED BY: John Caswell, Manager of Water and
 Wastewater Services
 Dave McGuire, Water Overall Responsible
 Operator
 Meghan Boyd, Compliance and Efficiency
 Coordinator

A. Recommendations

THAT Council approve the following resolutions as part of the implementation of the Drinking Water Quality Management Standard:

The Blue Mountains' Council commits to support the Drinking Water Quality Management Standard (DWQMS) and acknowledges Top Management will be responsible for the provisions of this document. Endorsement by the Owner and Top Management acknowledges and supports the provision of sufficient resources to maintain and continually improve the DWQMS.

AND FURTHER THAT Council authorizes the Mayor and Clerk to sign the revised Commitment and Endorsement Statement of the Drinking Water Quality Management Standard Operational Plan on behalf of the Owner of The Corporation of The Town of The Blue Mountains' water system, as outlined in EPW.09.050.

B. Background

The Municipal Drinking Water Licencing Program is a new approvals program established for municipal residential drinking water systems. The program requires Owners and Operating Authorities to incorporate quality management principles into the operations of their drinking water systems. The quality management objectives are incorporated into Operational Plans through procedures and documentation.

In accordance with Ontario Regulation 188/07, on or before July 01, 2009, the Owner of the Corporation of The Town of The Blue Mountains' Drinking Water System must submit to the Director:

- 1) an application for a Drinking Water Works Permit
- 2) an application for a licence, and
- 3) operational plan

The Operational Plan, required by the Municipal Licencing Program, is the document prepared by the Operating Authority detailing how the Town is complying with the PLAN, DO, CHECK, and IMPROVE components of the Drinking Water Quality Management Standard (DWQMS). In addition to submitting a copy of the Operational Plan to the Ministry of the Environment (MOE), the Owner submits an application, including the owner-endorsed Operational Plan to Canadian General Standards Board (CGSB), the third-party accreditation body chosen by the MOE.

At this time, Staff is prepared to apply for accreditation under the Option 2 - Limited Scope – Entire DWQMS (Limited scope accreditation based on the documentation review of twenty elements of the DWQMS).

Detailed below are the submission options available to Owners and Operating Authorities when submitting their Operational Plans.

Operational Plans – Municipal Drinking Water Licensing Program Submission Options ¹ :	
Option	Description
<p><i>Option # 1 – Limited Scope – Partial DWQMS</i></p> <p>Phased in documentation and implementation Limited scope accreditation followed by full scope accreditation</p>	<ul style="list-style-type: none"> • Prepare an operational plan that documents 12 key elements of the DWQMS and implement them • The operating authority will receive limited scope accreditation based on a successful third-party audit of the documentation and implementation of these 12 key elements • Document and implement the remaining nine elements of the DWQMS and submit an application to the accreditation body for full scope accreditation within 12 months of receiving certificate of accreditation (limited scope – partial DWQMS) • The operating authority will receive a certificate of accreditation (full scope – entire DWQMS) based on a successful third-party audit of the operational plan and implementation of all DWQMS requirements
<p><i>Option # 2 – Limited Scope – Entire DWQMS</i></p> <p>Full documentation Phased-in implementation Limited scope accreditation followed by full scope accreditation</p>	<ul style="list-style-type: none"> • Prepare an operational plan that documents 20 elements of the DWQMS. Element # 21 – Continual Improvement is not incorporated at this time. • The operating authority will receive limited scope accreditation based on a successful third-party audit of the documented 20 elements of the DWQMS • The operating authority must implement all 21 elements of the DWQMS and submit an application for full scope accreditation within 12 months of receiving a certificate of accreditation (limited scope – entire DWQMS) • The operating authority will receive a certificate of accreditation (full scope-entire DWQMS) based on a successful third-party audit of the operational plan and

<p>Option # 3 – Full Scope – Entire DWQMS</p> <p>Full documentation and implementation Full scope accreditation</p>	<p>implementation of all DWQMS requirements</p> <ul style="list-style-type: none"> • Provide an operational plan that documents all 21 elements of the DWQMS and implement them • The operating authority will receive a certificate of accreditation (full scope – entire DWQMS) based on a successful third-party audit of the operational plan and implementation of all DWQMS requirements
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¹Source – Operational Plans – Municipal Drinking Water Licencing Program Submission Options October 2007

Next Steps

The Commitment and Endorsement Statement was previously presented in EPW.08.11, provided for reference as Attachment # 1. The PLAN component of Element 3 requires that the operational plan is endorsed, in writing, by the Owner and Top Management. Obtaining and establishing Owner and Top Management commitment is both an initial and ongoing activity. Endorsement is essential to demonstrate support and involvement of the Quality Management System.

At a recent Top Management meeting, it was suggested that authorization for changes to the Operational Plan should clearly fall under the jurisdiction of Top Management. This would eliminate the requirement to seek Council approval for administrative changes. Council will continue to receive status updates to ensure their continued knowledge and understanding of the Plan.

Staff recommends the implementation of the following revised Commitment and Endorsement Statement to be signed by the Owner and Top Management:

The Blue Mountains’ Council commits to support the Drinking Water Quality Management Standard (DWQMS) and acknowledges Top Management will be responsible for the provisions of this document. Endorsement by the Owner and Top Management acknowledges and supports the provision of sufficient resources to maintain and continually improve the DWQMS.

A copy of the revised Commitment and Endorsement Statement for signature has been provided as Attachment # 2.

Staff is proceeding to implement and demonstrate continual improvement (Element # 21) of the Plan in order to attain Full Scope accreditation. Following implementation of the plan, the Health and Safety Coordinator and Water Meter Technician will proceed with an Internal Audit of the Quality Management System. Internal audits are conducted on an ongoing cycle, which requires that, at minimum, each element is audited on an annual basis to demonstrate continual improvement as well conformity to the standard. It is anticipated that the initial internal audit process will be completed by January 01, 2010, allowing staff enough time to implement corrective actions, if any, prior to a full submission by July 01, 2010.

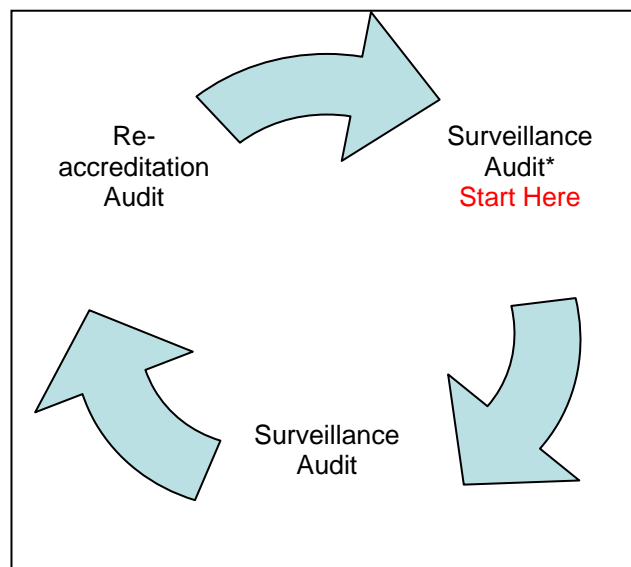
Concurrent to the internal audit, a documentation review will be carried out by the accreditation body to ensure that all required documentation has been submitted. An accredited auditor will perform a desktop systems audit to assess whether the Quality Management System for the Town meets the PLAN requirements for the twenty elements of the DWQMS. Should any non-conformities be discovered during the review, the non-conformities must be addressed to the satisfaction of the accreditation body, prior to the accreditation body issuing a Certificate of Accreditation (Limited Scope – Entire DWQMS) to the operating authority. The certificate will be issued subject to the condition that the operating authority submits a Full Scope – Entire DWQMS to the accreditation body within twelve months from the date of issuance of the limited scope certificate. A Full Scope accreditation will be based on a systems audit as well as on-site verification of all twenty-one elements of the DWQMS.

External Audit Cycle

The accreditation body will annually audit the QMS of an operating authority with a Certificate of Accreditation (Full Scope-Entire DWQMS), in accordance with the following schedule (refer to Figure 1):

- in the first year following the year in which the certificate was issued and every third year thereafter, the accreditation body will undertake a surveillance audit in accordance with the surveillance audit procedure;
- in the second year following the year in which the certificate was issued and every third year thereafter, the accreditation body will undertake a surveillance audit in accordance with the surveillance audit procedure;
- in the third year in which the certificate was issued and every third year thereafter, the accreditation body will undertake a re-accreditation audit in accordance with the re-accreditation audit procedure

Figure 1 – Accreditation Protocol – Operating Authorities –
Municipal Drinking-Water Systems July 2007



A Table of Contents, Executive Summary and Element # 1 has been provided as Attachment # 3. A complete copy of the Operational Plan is available for viewing in the Engineering and Public Works Department Library.

C. The Blue Mountains' Strategic Plan

The endorsement of the Operational Plan prepared for the Thornbury Water Treatment Plant and Distribution System furthers the Town Strategic Plan Goal # 6 "Providing a Strong, Well-Managed Municipal Government."

D. Environmental Impacts

Endorsement of the Operational Plan will help further the Town's sustainability initiatives by ensuring that a system of continuous improvement is applied to the production of the Town's drinking water. Many of the policies and procedures within the Operational Plan encourage practices that can help prevent accidental releases of chemicals into the environment, protect Operations Staff from workplace injury and ensure the public receives safe drinking water.

E. Budget Impact

Application Fee	\$500.00 plus GST	An initial, one time, non-refundable administration fees charged by Canadian General Standards Board for operating
Program Fee	\$3,625.00 \$145.00 per hour x 25 hours spent on Program specific tasks Estimated at 25 hours to complete initial document review	Fees charged at hourly rates to the operating authority by CGSB for Program-specific tasks such as conducting a systems audit
Internal Audit Time	\$5,048.00 Estimated at 80 hours per auditor to complete initial internal audit	As this is the first internal audit, the exact amount of time required to complete the audit is unknown at this time
Listing Fee	\$250.00 in advance to cover listing of operating authority for one year	An annual administrative fee charged to the operating authority by CGSB for the provision of ongoing accreditation management services
TOTAL \$9,423.00		

The application, program, and listing fee as well as the Health and Safety Coordinator's internal audit time, totalling \$9,423.00 will be funded through the Drinking Water Quality Management Standard budget which contains \$15,000.00 in 2009 Water Operational Budget. Consideration will be given to purchase office equipment as required for the implementation of the DWQMS. The remaining budget will be used as contingency to purchase any unforeseen items for the remainder of the year.

F. Attachments

Attachment #1 – EPW.08.11 – Drinking Water Quality Management Standard (DWQMS) Status Report

Attachment # 2 – Commitment and Endorsement Statement

Attachment # 3 - Excerpts from Operational Plan (Table of Contents, List of Appendices, Executive Summary and Element # 1)

Respectfully submitted,

John Caswell
Manager, Water and Wastewater Services

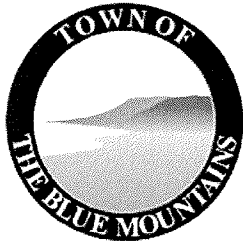
Reg Russwurm
Director, Engineering and Public Works

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REPORT REVISED (as per Committee at Jan. 29/08 meeting)STAFF REPORT: **ENGINEERING AND PUBLIC WORKS DEPARTMENT**

REPORT TO: Engineering and Public Works Committee
MEETING DATE: January 29, 2008
REPORT NO.: EPW.08.11
SUBJECT: Drinking Water Quality Management
 Standard (DWQMS) Status Report
PREPARED BY: John Caswell, Manager of Water and
 Wastewater Services Division

A. Recommendations

THAT Council approve the following recommendations as part of the implementation of the Drinking Water Quality Management Standard:

1. Appoint Paul Graham, CAO; Reg Russwurm, Director of Engineering & Public Works; and John Caswell, Manager of Water and Wastewater Services Division, as Top Management Representatives; and
2. Adopt the following Quality Management System (QMS) Policy Statement:

The Town of The Blue Mountains, consistent with its current policy of providing the public with safe drinking water, reaffirms its commitment to supplying safe, consistent drinking water while maintaining and improving the Quality Management System (QMS) meeting regulatory requirements. The Town will continue to strive to achieve these goals through the implementation of a Quality Management System comprised of policies and procedures through risk assessment evaluations, staff competencies, open communication, workplace safety and emergency contingency plans.

3. Adopt the following Commitment and Endorsement Statement:

The Town of The Blue Mountains commits to support the implementation, maintenance and continual improvement of a Drinking Water Quality Management Standard (DWQMS) as is documented in this Operational Plan. Endorsement by the Owner and Top Management acknowledges and supports the provision of sufficient resources to maintain and continually improve the DWQMS; and

4. Appoint Meghan Boyd, Operations Assistant, as the Quality Management System Representative and that the role of the Quality Management System Representative will be fulfilled by the Water and Wastewater Compliance Co-ordinator after the Proposed 2008 Water and Wastewater Services Division Budget has been approved by Council and a candidate has been selected; and
5. Appoint Dave McGuire, Water Overall Responsible Operator, to serve as the Implementation Lead.

B. Background

A Drinking Water Quality Management Standard (DWQMS) is defined as policies, procedures, responsibilities and evaluation measures needed to ensure the delivery of the management system to specified standards. The DWQMS is a custom-made Standard specific to the requirements of drinking-water systems in Ontario. Its requirements are similar to ISO-based quality management systems, but not equivalent.

EPW.07.122 regarding the Drinking Water Quality Management Standard was previously circulated to Council for their information and outlined the responsibilities and procedures required to initiate and implement a Quality Management System (QMS) (Element #1) for the Town as required by Provincial Standards.

Obtaining or establishing Top Management Commitment is both an initial and ongoing activity. The QMS requires representation and identification of Top Management which is defined as "a person, persons, or group of people at the highest management level within an operating authority that makes decisions about the QMS and makes recommendations to the owner about the subject system." Staff recommends the appointment of Paul Graham, CAO; Reg Russwurm, Director of Engineering & Public Works; and John Caswell, Manager of Water and Wastewater Services Division, as Top Management Representatives.

The DWQMS requires the Town to implement a policy that is endorsed by the Owners, Top Management and Operational Staff. This policy includes a commitment to the maintenance and continual improvement of the Quality Management System – a commitment to the consumer to provide safe drinking water and a commitment to comply with applicable legislation and regulations. The Policy Statement (Element # 2) as outlined in the previously circulated EPW.07.122 has been revised to the following:

The Town of The Blue Mountains consistent with its current policy of providing the public with safe drinking water reaffirms its commitment to supplying safe, consistent drinking water supply while maintaining and improving the Quality Management System meeting regulatory requirements. The Town will continue to strive to achieve these goals through the implementation of a Quality Management System comprised of policies and procedures through risk assessment evaluations, staff competencies, open communication, workplace safety and emergency contingency plans.

The DWQMS also requires the Town to adopt a Commitment and Endorsement Statement. The purpose of the Commitment and Endorsement Statement is to:

- ensure a Quality Management System is in place that meets the requirements of the DWQMS;
- ensure the operating authority is aware of all applicable legislative and regulatory requirements;
- communicate the Quality Management System according to the procedure for communications;
- determine, obtain or provide the resources to maintain and continually improve the Quality Management System.

For the purposes of the Commitment and Endorsement Statement (Element # 3), the Owner shall mean the Corporation of the Town of The Blue Mountains as represented by the Mayor and the Clerk in their representative capacities, Top Management shall mean Paul Graham, Reg Russwurm, and John Caswell.

In general, the concepts outlined in the DWQMS concepts are, for the most part, how owners and operating authorities currently manage and operate their drinking water systems. The DWQMS, however, require that these concepts be formalized and documented in an Operational Plan, and that there is a documented commitment throughout the organisation to continuously review and improve these practices.

Staff recommends the implementation of the following Commitment and Endorsement Statement:

The Town of The Blue Mountains commits to support the implementation, maintenance and continual improvement of a Drinking Water Quality Management Standard (DWQMS) as is documented in this Operational Plan. Endorsement by the Owner and Top Management acknowledges and supports the provision of sufficient resources to maintain and continually improve the DWQMS.

_____ Date	_____ Owner and Operating Authority – On behalf of the Corporation by its Signing Officer The “Mayor” Ellen Anderson
_____ Date	_____ Owner and Operating Authority - On behalf of the Corporation by its Signing Officer The “Clerk” Stephen Keast
_____ Date	_____ Top Management Representative of the Owner and Operating Authority - Paul Graham, P.Eng, CAO
_____ Date	_____ Top Management Representative of the Owner and Operating Authority - Reg Russwurm, MBA, P.Eng, Director of Engineering and Public Works
_____ Date	_____ Top Management Representative of the Owner and Operating Authority - John Caswell Manager of Water & Wastewater Services Division

Staff recommends the Quality Management System Representative as appointed by Top Management be Meghan Boyd, Operations Assistant, as an interim measure. The role of the Quality Management System Representative will be fulfilled by the Water and Wastewater Compliance Co-ordinator after the proposed 2008 Water and Wastewater Services Division Budget has been approved by Council and a candidate has been selected. Staff also recommends that Dave McGuire, Water Overall Responsible Operator serves as the Implementation Lead.

The DWQMS requires municipalities to produce a Responsibilities Table identifying respective roles and responsibilities. The responsibilities of the Town and Staff members during the implementation of the DWQMS are outlined in Attachment #1 – Responsibilities Table.

Attachment #2 - The Communication Network, demonstrates the links that will be instrumental in ensuring a flow of information between all participants is established and maintained.

The implementation of all twenty-one elements required in the DWQMS will be completed over the course of the next eighteen months. The Town of The Blue Mountains is required to submit their final DWQMS to the MOE by July 1, 2009. A time schedule (Gantt Chart) for completing the twenty-one elements is included in this report as Attachment #3. This Gantt Chart breaks down each element and provides Staff with milestone dates to ensure the Quality Management System is in place prior to the July 1, 2009 deadline. Upon the approval of the recommendations in this report, the Town will have fulfilled three of the twenty one elements.

As mentioned above, the Town intends to have the Water and Wastewater Compliance Co-ordinator assist full time in the formulation of the DWQMS for all of 2008 and possibly a few months in 2009. After that, the Operational Plan will be maintained and updated on a regular basis by this person. There is also \$15,000 proposed in both the 2008 and 2009 Budget to retain external assistance with implementing this Standard. All Staff from the Water Group will be assisting with various elements of the DWQMS during the next eighteen months.

C. The Blue Mountains' Strategic Plan

The Drinking Water Quality Management Standard furthers the Town Strategic Plan Goals:

- # 1 "Managing the Growth to Ensure the Ongoing Health and Prosperity of the Community";
- # 2 "Addressing the Town Municipal Infrastructure Needs";
- # 5 "Ensuring long term financial sustainability", and
- # 6 "Providing a Strong, Well-Managed Municipal Government".

D. Budget Impact

Proposed Capital Budget:

- . 2008 - \$15,000;
- . 2009 - \$15,000;
- . Expected Wages and Benefits 2008 - \$60,000 - for Water and Wastewater Compliance Co-ordinator;

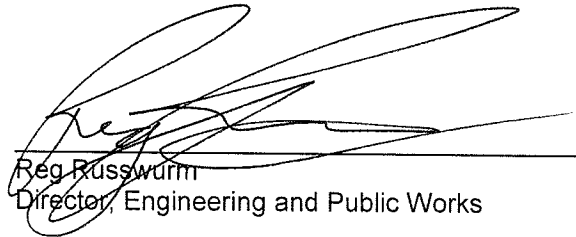
E. Attached

1. Responsibilities Table
2. Communication Network
3. DWQMS Gantt Schedule

Respectfully submitted,



John Caswell
Manager of Water and Waste Water Services Division



Reg Russwurm
Director, Engineering and Public Works

June 2009

Element # 3 - Commitment and Endorsement

The Blue Mountains’ Council commits to support the Drinking Water Quality Management Standard (DWQMS) and acknowledges Top Management will be responsible for the provisions of this document. Endorsement by the Owner and Top Management acknowledges and supports the provision of sufficient resources to maintain and continually improve the DWQMS.

Date	Owner and Operating Authority – On behalf of the Corporation by its Signing Officer The “Mayor” Ellen Anderson
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Date	Owner and Operating Authority – On behalf of the Corporation by its Signing Officer The “Clerk” Stephen Keast
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Date	Top Management Representative of the Owner and Operating Authority – Paul Graham, P.Eng, Chief Administrative Officer
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Date	Top Management Representative of the Owner and Operating Authority - Reg Russwurm, MBA, P.Eng, Director of Engineering and Public Works
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Date	Top Management Representative of the Owner and Operating Authority – John Caswell, Manager of Water & Wastewater Services Division
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Executive Summary

A Drinking Water Quality Management Standard (DWQMS) is defined as policies and procedures, responsibilities and evaluation measures needed to ensure the delivery of the management system to specified standards. The DWQMS is a custom-made Standard specific to the requirements of drinking-water systems in Ontario.

In October 2006, the Ministry of the Environment introduced the Drinking Water Quality Management Standard in response to Justice O'Connor's Part Two of the Walkerton Inquiry requirement for the "adoption of quality management systems for drinking water systems."

The purpose of the DWQMS is to protect public health by achieving consistent good practice in managing and operating a drinking water system. The implementation of the DWQMS will strive to promote the adoption of best practices and continual improvement as well as preventative rather than strictly reactive strategies to protect public health.

The successful implementation of a Quality Management System (QMS) will assist Town staff in ensuring the requirements of the Ministry of the Environment are continually improved upon. Moreover, this document will supply Top Management and Members of Council with the necessary tools to make informed decisions concerning the safe delivery of water.

The Operational Plan consists of twenty-one elements which are incorporated into this plan through procedures and documentation. The preceding elements outline such concepts as Owner and Operating Authority responsibilities, risk assessment and hazard analysis, emergency planning and document and record control.

The Town will strive to continually improve the effectiveness of its QMS through the use of corrective actions from internal audits, staff suggestions and management reviews.

June 2009

Element # 1 – The Quality Management System

This document is the Drinking Water Quality Management System Operational Plan for The Blue Mountains' Water System. The Blue Mountains' Water System is owned and operated by the Corporation of The Town of The Blue Mountains.

Element # 1 of the Operational Plan requires this document to establish and maintain the Quality Management System in accordance with the requirements of this Standard and the policies and procedures documented in the Operational Plan. The next twenty elements will demonstrate the manner in which we will comply with the requirements of the DWQMS.

Participants of the DWQMS include:

Paul Graham, Chief Administrative Officer,
Top Management Representative

Reg Russwurm, Director of Engineering and Public Works,
Top Management Representative

John Caswell, Manager of Water and Wastewater Services Division,
Top Management Representative

Dave McGuire, Water Overall Responsible Operator,
Implementation Lead

Meghan Boyd, Water and Wastewater Compliance and Efficiency Coordinator,
Quality Management System Representative

Stephanie Cole, Water Operations Staff

Rob Gilchrist, Water Operations Staff

Scott Hill, Water Operations Staff

Scott Marritt, Water Operations Staff

Don McArthur, Water Operations Staff

Brian O'Reilly, Water Operations Staff/Internal Auditor

Darren Shilvock, Water Operations Staff

Liz Stinson, Water and Wastewater Operations Assistant

Sarah Hills, Internal Auditor