



The Corporation of the Township of St. Clair



Quality **M**anagement **S**ystem **OPERATIONAL PLAN**

**St. Clair Water Distribution
System No. 260006464
Certificate No. 3260**

Printed: January 2, 2018

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	
		Revision: #	Rev. 3
		Title:	Table of Contents
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
Signature:		Approval Date:	November 27, 2017
Location:	Public Works		



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	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	
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		Title:	Disclaimer Statement
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Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

DISCLAIMER STATEMENT

This Operational Plan is for the exclusive use of **The Corporation of the Township of St. Clair**.

This Operational Plan has been developed with OCWA's assistance.



Any use which a third party makes of this Operational Plan, or any part thereof, or any reliance on or decisions made based on information within it, is the responsibility of such third parties. OCWA and The Municipality accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions taken based on this Operational Plan or any part thereof.

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	
		Revision: #	Rev. 2
		Title:	Operational Plan – Facility and Owner/Operator
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

OPERATIONAL PLAN – FACILITY & OWNER/OPERATOR

This Operational Plan defines and documents the Quality Management System (QMS) for the **St. Clair Water Distribution System No. 260006464**, owned and operated by **the Corporation of the Township of St. Clair**. It sets out the Corporation of the Township of St. Clair's policies and procedures with respect to quality management in accordance with the requirements of the Province of Ontario's Drinking Water Quality Management Standard (DWQMS).

Throughout this document where the “Municipality” is referenced, it shall mean “the Corporation of the Township of St. Clair”.

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 1
		Revision: #	Rev. 2
		Title:	Quality Management System
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		



ELEMENT 1: QUALITY MANAGEMENT SYSTEM (QMS)

The Corporation of the Township of St. Clair is the Owner and Operating Authority for the **St. Clair Water Distribution System No. 260006464**.

This document is to establish and maintain the Quality Management System (QMS) in accordance to the DWQMS and the policies and procedures documented in this Operational Plan, for the distribution of safe drinking water to the customers of the **St. Clair Water Distribution System No. 260006464**.



Water is supplied to the Municipality by the Lambton Area Water Supply System (LAWSS).

The Municipality distributes safe drinking water to the customers of the **St. Clair Water Distribution System No. 260006464**.

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 2
		Revision: #	Rev. 2
		Title:	Quality Management System Policy
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 2: QUALITY MANAGEMENT SYSTEM (QMS) POLICY


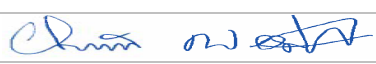
- The Municipality is committed to the reliable distribution of safe drinking water to our customers.
- The Municipality is committed to comply with applicable legislative and regulatory requirements associated with safe drinking water.
- The Municipality is committed to maintaining and continually improving its QMS through a commitment to training, education and communication with staff, clients and stakeholders.
- The Municipality is committed to protecting public health by performing audit and risk assessment reviews to maintain and improve its policies and practices.

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 3
		Revision: #	Rev. 5
		Title:	Commitment and Endorsement
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 3: COMMITMENT & ENDORSEMENT

The Owner and Operating Authority of the Municipality has approved the QMS for St. Clair Water Distribution System No. 260006464 as documented in this Operational Plan. The Owner includes the Mayor and Clerk. The Operating Authority includes the Director of Public Works and the Coordinator of Operations Water/Wastewater. The QMS commitment and endorsement is re-endorsed at a minimum when there is a change in the Owner or Operating Authority of the Municipality or if there is a major change to the Operational Plan.

Refer to **Annex A – Commitment & Endorsement**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 4
		Revision: #	Rev. 4
		Title:	Quality Management System Representative
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
Signature:		Approval Date:	November 27, 2017
Location:	Public Works		



ELEMENT 4: QUALITY MANAGEMENT SYSTEM REPRESENTATIVE

The QMS Representative shall be the Water/Wastewater Specialist, or the individual designated by the Coordinator of Operations Water/Wastewater, as appointed by Upper Management.

The QMS Representative's responsibilities include;

- Promoting awareness of the QMS to all facility personnel.
- Conducting Risk Assessment and Internal Audits.
- Reporting on QMS performance and identifying opportunities for improvement.
- Ensuring that current versions of documents related to the QMS are in use.
- Ensuring personnel are aware of all applicable legislative and regulatory requirements that pertain to their operational duties.



The Coordinator of Operations Water/Wastewater is ultimately responsible for activities related to the operation of the water distribution system and the Water/Wastewater Specialist is responsible for establishing and maintaining processes and procedures required for the overall administration of the facility's QMS.

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 5
		Revision: #	Rev. 2
		Title:	Documents and Records Control
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
Signature:		Approval Date:	November 27, 2017
Location:	Public Works		

ELEMENT 5: DOCUMENTS AND RECORDS CONTROL

Procedure to describe the methods for identification, storage, protection, retrieval, retention time and disposition of records.

Refer to **QMS Procedure - 702.01 Documents and Records Control**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 6
		Revision: #	Rev. 8
		Title:	Drinking Water System
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	December 7, 2017
Signature:		Approval Date:	December 14, 2017
Location:	Public Works		

ELEMENT 6: DRINKING-WATER SYSTEM

Owner/Operating Authority

The Corporation of the Township of St. Clair is the Owner and Operating Authority for the **St. Clair Water Distribution System No. 260006464**.

Source Description



Water is supplied to The Municipality by the Lambton Area Water Supply System (LAWSS) which is situated in the City of Sarnia on the southern tip of Lake Huron at the headwaters of the St. Clair River. LAWSS is owned by the Lambton Area Water Supply Joint Management Board whose municipal members include the Corporation of City of Sarnia, the Corporation of Township of St. Clair, Corporation of Town of Plympton/Wyoming, Corporation of Village of Point Edward, Corporation of Township of Warwick and the Corporation of the Municipality of Lambton Shores.

LAWSS is a direct filtration surface water treatment facility with a total design capacity of 181,844 m³ per day. LAWSS supplies sufficient disinfection to meet the regulatory requirements within the distribution systems. Supplemental rechlorination is practiced at the East Lambton Station which supplies water to the Corporation of the Township of Warwick, Corporation of the Town of Plympton-Wyoming, Corporation of the Municipality of Brooke-Alvinston and the Municipality of Lambton Shores. The West Lambton Booster Station rechlorinates as required to supply secondary disinfection for the Corporation of the City of Sarnia and the Corporation of the Township of St. Clair distribution networks.

System Description

Treated Water is supplied by LAWSS 210000906 and distributed to the customers of the St. Clair Water Distribution System 260006464. The system has one rechlorination point at the Brigden Elevated Water Tower, and has emergency interconnections with adjoining Municipalities. The Owners and Operating Authorities of the emergency interconnections are as follows:

Owner (Municipality)	Operating Authority	Drinking Water System #
Township of Dawn Euphemia	Township of Dawn Euphemia Public Works	260046904
Township of Enniskillen	Township of Enniskillen	220004377
City of Sarnia	Sarnia Public Works Division	260003136
Public Utilities Commission for the Municipality of Chatham-Kent (CK PUC)	Public Utilities Commission for the Municipality of Chatham- Kent (CK PUC)	220003341

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 6
		Revision: #	Rev. 8
		Title:	Drinking Water System
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	December 7, 2017
Signature:		Approval Date:	December 14, 2017
Location:	Public Works		



A SCADA system monitors pressure, flow, and chlorine residual at the Brigden Elevated Water Tower. Distribution system continuous monitoring is located at the Port Lambton Storm Station to monitor for chlorine residual as a daily operational check as per O. Reg. 170/03. Distribution System sampling and testing requirements as per O. Reg. 170/03 are conducted by OCWA. Customers are metered for water usage. Replacement of aging infrastructure is performed under Capital Projects.

The St. Clair Water Distribution System No. 260006464 is currently supplying drinking water to the City of Sarnia Water Distribution System No. 260003136, at St. Clair Parkway and LaSalle Line, owned and operated by the City of Sarnia. The City of Sarnia Water Distribution No. 260003136 is currently supplying St Clair Water Distribution System No. 260006464 at Plank Road North of LaSalle Line.

Refer to Annex B Schematic; Annex I Brigden Tower System Description; Annex J Distribution System

Processes outside of our control, include the Port Lambton Water Tower, which is owned by LAWSS and operated by OCWA.



During sampling and flushing procedures which could affect individual customer water pressure, notification is given to those who have requested special notification prior to performing the activity.

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 7
		Revision: #	Rev. 2
		Title:	Risk Assessments
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 7: RISK ASSESSMENTS

Procedure to define the process for conducting a safe drinking water risk assessment and for documenting and reviewing the results of the assessment at the facility level.



Refer to **QMS Procedure - 702.02 Risk Assessment & Outcomes**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 8
		Revision: #	Rev. 2
		Title:	Risk Assessment Outcomes
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 8: RISK ASSESSMENT OUTCOMES

Outcomes of the Risk Assessment.

Refer to **Annex C - Risk Assessment & Outcomes Table**



	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 9
		Revision: #	Rev. 2
		Title:	Organizational Structure, Roles, Responsibilities and Authorities
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 9: ORGANIZATIONAL STRUCTURE, ROLES, RESPONSIBILITIES, AND AUTHORITIES

The QMS Representative will update changes to the Organizational Structure, Roles, Responsibilities, and Authorities and will communicate this information to the Owner and Operating Authority.

Refer to **Annex D - Organizational Structure**

Refer to **Annex E – Roles, Responsibilities & Authorities Table**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 10
		Revision: #	Rev. 4
		Title:	Competencies
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 10: COMPETENCIES



The Competency Requirements Table illustrates the competencies required by personnel whose duties directly affect safe drinking water quality.

Refer to **Annex F - Competency Requirements Table**

The competencies required by personnel, whose duties directly affect safe drinking water quality, are addressed by various means, including:

- All employees will provide evidence of certification and other “required” competencies. All MOECC required certificates or copies thereof are posted at the Moore Operations Centre.
- All employees undergo training to perform their duties, including a review of the QMS Operational Plan
- Competency is monitored through job performance reviews.
- All employees shall complete training which meets or exceeds the requirements of O. Reg.128/04.
- Changes to the Distribution System and/or to the QMS are communicated, as necessary.



All employees shall provide records of training to be maintained as proof that the required training has been successfully completed. The Water/Wastewater Specialist is responsible for monitoring the completion of all identified training.

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 11
		Revision: #	Rev. 2
		Title:	Personnel Coverage
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 11: PERSONNEL COVERAGE

Procedure for ensuring that sufficient and competent personnel are available for duties that directly affect safe drinking water quality.



Refer to **QMS Procedure - 702.03 Personnel Coverage**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 12
		Revision: #	Rev. 2
		Title:	Communications
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 12: COMMUNICATIONS

Procedure to describe QMS-related communications between Upper Management and the Owner, the Operating Authority personnel, Suppliers and the Public.

Refer to **QMS Procedure - 702.04 Communications**



	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 13
		Revision: #	Rev. 2
		Title:	Essential Supplies and Services
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
Signature:		Approval Date:	November 27, 2017
Location:	Public Works		

ELEMENT 13: ESSENTIAL SUPPLIES AND SERVICES

Procedure for procurement and for ensuring the quality of essential supplies and services.

Refer to **QMS Procedure - 702.05 Essential Supplies and Services**



Refer to **Annex G - Essential Supplies and Services Table**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 14
		Revision: #	Rev. 2
		Title:	Review and Provision of Infrastructure
		Implementation Date:	February 2, 2009
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Location:	Public Works		

ELEMENT 14: REVIEW AND PROVISION OF INFRASTRUCTURE

Procedure for the review of the adequacy of the infrastructure.

Refer to **QMS Procedure - 702.06 Review and Provision of Infrastructure**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 15
		Revision: #	Rev. 5
		Title:	Infrastructure Maintenance, Rehabilitation and Renewal
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	December 8, 2017
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Location:	Public Works		

ELEMENT 15: INFRASTRUCTURE MAINTENANCE, REHABILITATION AND RENEWAL



The Coordinator of Operations Water/Wastewater with the assistance of the Water/Wastewater Specialist plans and authorizes all Infrastructure Maintenance. Inspection and maintenance plans are developed according to a combination of: manufacturer's instructions, regulatory requirements, industry standards, risk based assessments, equipment operating history and/or client requirements.

Infrastructure inspection and maintenance is performed through programs including valve exercising, watermain flushing, hydrant maintenance, chlorine residual sampling, backflow calibration and meter calibration. Infrastructure Maintenance is scheduled through Work Orders, and documented on Work Orders and record sheets. Planned Infrastructure Maintenance is communicated by monthly reports to the Owner.

The ORO or Operator In Charge (OIC) authorizes all unplanned infrastructure maintenance in a timely manner. Unplanned Infrastructure Maintenance is scheduled through Work Orders and documented on Work Orders and record sheets. Unplanned Infrastructure Maintenance is communicated by monthly reports to the Owner.

Work order history, record sheets, inspection reports and regulatory standards are reviewed for Infrastructure Renewal and Rehabilitation needs. The Coordinator of Operations Water/Wastewater submits the Capital Budget Reports to the Director of Public Works for inclusion in the Capital Budget Plan to the Owner annually.



Refer to **Annex K – Provision of Infrastructure**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 16
		Revision: #	Rev. 2
		Title:	Sampling, Testing and Monitoring
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 16: SAMPLING, TESTING, AND MONITORING

Procedure to describe sampling, testing and monitoring of the St. Clair Water Distribution System No. 260006464.



Refer to **QMS Procedure - 702.07 Sampling, Testing and Monitoring**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 17
		Revision: #	Rev. 2
		Title:	Measurement and Recording Equipment Calibration and Maintenance
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 17: MEASUREMENT AND RECORDING EQUIPMENT CALIBRATION AND MAINTENANCE



Procedure to describe the calibration and maintenance of measurement and recording equipment.

Refer to **QMS Procedure - 702.08 Measurement and Recording Equipment Calibration and Maintenance**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 18
		Revision: #	Rev. 2
		Title:	Emergency Management
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		



ELEMENT 18: EMERGENCY MANAGEMENT

Procedure for maintaining a state of emergency preparedness.
Refer to **QMS Procedure - 702.09 Emergency Management**
Refer to **Annex H – Emergency Contact List**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 19
		Revision: #	Rev. 2
		Title:	Internal Audits
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
Signature:		Approval Date:	November 27, 2017
Location:	Public Works		

ELEMENT 19: INTERNAL AUDITS



Procedure to conduct an internal audit process.
Refer to **QMS Procedure -702.10 Internal Audits**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 20
		Revision: #	Rev. 3
		Title:	Management Review
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 20: MANAGEMENT REVIEW

Procedure to document the management review process that evaluates the continuing suitability, adequacy and effectiveness of the QMS.

Refer to **QMS Procedure -702.11 Management Review**

	The Corporation of the Township of St. Clair Public Works QMS Operational Plan	QMS: #	Element 21
		Revision: #	Rev. 3
		Title:	Continual Improvement
		Implementation Date:	February 2, 2009
Approved By:	Chris Westbrook	Review/Update Date:	October 6, 2017
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Location:	Public Works		

ELEMENT 21: CONTINUAL IMPROVEMENT

The Municipality shall strive to continually improve the effectiveness of its QMS through the use of corrective actions and opportunities for improvement from annual audits, staff suggestions, and management reviews. The corrective actions and opportunities for improvement are tracked and managed through the St Clair Action Register.