

# The Corporation of the Township of St. Clair



## Quality Management System **OPERATIONAL PLAN**

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



**Certificate No. 3260**

**MDWL 039-101**

**DWWP 039-201**

**DWQMS Version 2.0**

Printed: January 7, 2025

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	
		<b>Revision: #</b>	Rev. 4
		<b>Title:</b>	Table of Contents
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
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<b>Location:</b>	Public Works		



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2	Dec 20, 2016	Reviewed and revised page numbers	Nova VanderSlagt
3	Oct 6, 2017	Revised header	Nova VanderSlagt
4	Aug 23, 2018	Added revision history and revised page numbers.	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	
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<b>Location:</b>	Public Works		

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## DISCLAIMER STATEMENT

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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.

### Revision History:

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1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

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<b>Location:</b>	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”.**

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1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
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	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 1
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<b>Location:</b>	Public Works		

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## ELEMENT 1: QUALITY MANAGEMENT SYSTEM (QMS)

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**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 with the DWQMS Version 2.0 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**.

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1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history and version 2.0	Nova VanderSlagt



	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 2
		<b>Revision: #</b>	Rev. 3
		<b>Title:</b>	Quality Management System Policy
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	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.

### Revision History:

Revision No.	Date	Description of Revision	Revised By
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1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 3
		<b>Revision: #</b>	Rev. 7
		<b>Title:</b>	Commitment and Endorsement
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	February 12, 2020
<b>Signature:</b>		<b>Approval Date:</b>	February 14, 2020
<b>Location:</b>	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 (Deputy CAO). The Operating Authority (Upper Management) includes the Director of Public Works and the Coordinator of Operations Water/Wastewater. Top Management as per the DWQMS Standard is referred to as Upper Management in this Operational Plan. 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**

#### Revision History:

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1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Jan 5, 2016	Revised to clarify who endorses the QMS Operational Plan and when re-endorsement is necessary.	Nova VanderSlagt
3	Dec 8, 2016	Removed the Water/Wastewater Specialist or Council approved designate (ORO) and replaced with the Coordinator of Operations Water/Wastewater.	Nova VanderSlagt
4	June 19, 2017	Added that the OP will be re-endorsed if there is a major change in the operational plan.	Nova VanderSlagt
5	Oct 6, 2017	Revised header	Nova VanderSlagt
6	Aug 23, 2018	Added revision history	Nova VanderSlagt
7	Feb 12, 2020	Clarified Upper Management is Top Management.	Nova VanderSlagt



	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 4
		<b>Revision: #</b>	Rev. 6
		<b>Title:</b>	Quality Management System Representative
		<b>Implementation Date:</b>	February 2, 2009
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<b>Signature:</b>		<b>Approval Date:</b>	January 6, 2025
<b>Location:</b>	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. In the event the Water/Wastewater Specialist is unavailable to complete the responsibilities of the QMS Rep, the Coordinator of Operations Water/Wastewater can fill the role until another individual can be appointed.



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.

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0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	Remove 1st paragraph "in the absence of water/wastewater Specialist/ORO etc. as the statement is repeated in paragraph 3. Once paragraph 1 removed, the remaining paragraphs were rearranged. (1 replaced 2 and 2 replaced 1)	Connie Garrison (CH2M)
2	Dec 12, 2012	The header table has been revised and/or added to include,	Connie Garrison (CH2M)

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 4
		<b>Revision: #</b>	Rev. 6
		<b>Title:</b>	Quality Management System Representative
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<b>Signature:</b>		<b>Approval Date:</b>	January 6, 2025
<b>Location:</b>	Public Works		

		title, element, Municipality logo and footer to include print date and uncontrolled when printed	
3	Dec 8, 2016	Removed the Council approved designate or ORO. Changed the Coordinator to designate the QMS Rep, The Coordinator is responsible for operations and the Water/Wastewater Specialist is responsible for the QMS.	Nova VanderSlagt
4	Oct 6, 2017	Revised header	Nova VanderSlagt
5	Aug 23, 2018	Added revision history	Nova VanderSlagt
6	Nov 21, 2024	Added the Coordinator of Operations Water/Wastewater as the backup to the QMS Rep.	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 5
		<b>Revision: #</b>	Rev. 3
		<b>Title:</b>	Documents and Records Control
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

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## **ELEMENT 5: DOCUMENTS AND RECORDS CONTROL**



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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**

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1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 6
		<b>Revision: #</b>	Rev. 13
		<b>Title:</b>	Drinking Water System
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	May 28, 2024
<b>Signature:</b>		<b>Approval Date:</b>	January 6, 2025
<b>Location:</b>	Public Works		

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## **ELEMENT 6: DRINKING-WATER SYSTEM**

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### **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.

The raw water source is the St. Clair River. The general characteristics for the water from the St. Clair River are typically low in turbidity, slightly basic and low in conductivity. The temperature fluctuates significantly through the seasons ranging from approximately 2°C in the winter to as high as 25°C during the summer. Bacteriological analysis indicates the raw water quality is relatively good quality. Some potential threats would include agricultural runoff, spills from cargo vessels travelling between the upper and lower Great Lakes and international upstream discharges from Municipalities and local industry. Some operational challenges may include ice, algae and storms or hurricane weather. OCWA monitors LAWSS raw water source.

LAWSS is a direct filtration surface water treatment facility with a total design capacity of 181,844 m<sup>3</sup> 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 Brigen Elevated Water Tower and has emergency interconnections with adjoining Municipalities. The Owners and Operating Authorities of the emergency interconnections are as follows:

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 6
		<b>Revision: #</b>	Rev. 13
		<b>Title:</b>	Drinking Water System
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<b>Signature:</b>		<b>Approval Date:</b>	January 6, 2025
<b>Location:</b>	Public Works		

<b>Owner (Municipality)</b>	<b>Operating Authority</b>	<b>Drinking Water System #</b>
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
Township of St. Clair	Township of St. Clair Public Works	260006464

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. An auto flusher at the Port Lambton Storm Station is utilized when necessary to increase chlorine residuals in the south end.



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 at St Clair Parkway and LaSalle Line as well as Virgil Avenue and LaSalle Line to the City of Sarnia Water Distribution System No. 260003136, 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.



	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 6
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1	Dec 3, 2012	System Description - Chatham-Kent currently	Nova VanderSlagt
2	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
3	Nov 28, 2013	Page 8 - Remove the last paragraph. This statement is no longer valid.	Connie Garrison (CH2M)
4	Jan 5, 2016	Added - 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.	Nova VanderSlagt
5	Dec 8, 2016	Added, 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.	Nova VanderSlagt
6	June 19, 2017	Added the Owners and Operating Authority for the emergency interconnections. Revised that the Port Lambton Tower is owned by LAWSS and operated by OCWA.	Nova VanderSlagt
7	Oct 6, 2017	Revised header	Nova VanderSlagt
8	Dec 7, 2017	Added the CL17 in Port Lambton to the system description.	Nova VanderSlagt
9	Aug 23, 2018	Added revision history	Nova VanderSlagt
10	May 30, 2019	Added raw water source info including general characteristics,	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 6
		<b>Revision: #</b>	Rev. 13
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<b>Location:</b>	Public Works		

		fluctuations, operational changes and threats.	
11	Dec 30, 2020	Added the location of Virgil Avenue and LaSalle Line where City of Sarnia is receiving water from St Clair Township.	Nova VanderSlagt
12	Dec 5, 2023	Added the Port Lambton Storm Station autoflusher.	Nova VanderSlagt
13	May 28, 2024	Clarified that Public Works is the Operating Authority for the Township of St. Clair.	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 7
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<b>Location:</b>	Public Works		

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## ELEMENT 7: RISK ASSESSMENTS

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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**

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0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt



	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 8
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		<b>Title:</b>	Risk Assessment Outcomes
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<b>Location:</b>	Public Works		

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## ELEMENT 8: RISK ASSESSMENT OUTCOMES



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Outcomes of the Risk Assessment.

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

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0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 9
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		<b>Title:</b>	Organizational Structure, Roles, Responsibilities and Authorities
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<b>Location:</b>	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**

Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 10
		<b>Revision: #</b>	Rev. 5
		<b>Title:</b>	Competencies
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	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 MECP 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.

### Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Jan 5, 2016	Edited MOE to MOECC.	Nova VanderSlagt
3	Dec 8, 2016	Removed Council approved designate (ORO).	Nova VanderSlagt
4	Oct 6, 2017	Revised header	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 10
		<b>Revision: #</b>	Rev. 5
		<b>Title:</b>	Competencies
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

5	Aug 23, 2018	Added revision history and revised MOECC to MECP	Nova VanderSlagt
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	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 11
		<b>Revision: #</b>	Rev. 3
		<b>Title:</b>	Personnel Coverage
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

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## ELEMENT 11: PERSONNEL COVERAGE



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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**

Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 12
		<b>Revision: #</b>	Rev. 3
		<b>Title:</b>	Communications
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

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## ELEMENT 12: COMMUNICATIONS



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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**

Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 13
		<b>Revision: #</b>	Rev. 3
		<b>Title:</b>	Essential Supplies and Services
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

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### **ELEMENT 13: ESSENTIAL SUPPLIES AND SERVICES**

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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**

Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 14
		<b>Revision: #</b>	Rev. 3
		<b>Title:</b>	Review and Provision of Infrastructure
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

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## ELEMENT 14: REVIEW AND PROVISION OF INFRASTRUCTURE



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Procedure for the review of the adequacy of the infrastructure.  
Refer to **QMS Procedure - 702.06 Review and Provision of Infrastructure**

### Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt



	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 15
		<b>Revision: #</b>	Rev. 8
		<b>Title:</b>	Infrastructure Maintenance, Rehabilitation and Renewal
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	July 28, 2023
<b>Signature:</b>		<b>Approval Date:</b>	February 2, 2024
<b>Location:</b>	Public Works		

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## ELEMENT 15: INFRASTRUCTURE MAINTENANCE, REHABILITATION AND RENEWAL

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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 testing and meter calibration. Infrastructure Maintenance is scheduled and managed through a Computerized Maintenance Management System (CMMS) 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 and managed through the CMMS and record sheets. Unplanned Infrastructure Maintenance is communicated by monthly reports to the Owner.



Infrastructure rehabilitation and renewal needs are considered every calendar year in consultation with the Coordinator of Operations Water/Wastewater, the Coordinator of Engineering, the Director of Public Works and the Water/Wastewater Specialist. The 10-year capital plan provides a long-term list of major recommendations and is reviewed at this time. Work order history, record sheets, inspection reports and regulatory standards are reviewed for Infrastructure Renewal and Rehabilitation needs. The Coordinator of Operations Water/Wastewater and the Coordinator of Engineering submit 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**

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 15
		<b>Revision: #</b>	Rev. 8
		<b>Title:</b>	Infrastructure Maintenance, Rehabilitation and Renewal
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	July 28, 2023
<b>Signature:</b>		<b>Approval Date:</b>	February 2, 2024
<b>Location:</b>	Public Works		

Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Jan 5, 2016	Added 'Coordinator of Operations' in the last paragraph, to communicate annually with the Capital Budget Plan.	Nova VanderSlagt
3	Dec 8, 2016	Clarified the Coordinator of Operations is Water/Wastewater.	Nova VanderSlagt
4	Oct 6, 2017	Revised header	Nova VanderSlagt
5	Dec 8, 2017	Added "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" to clarify.	Nova VanderSlagt
6	Aug 23, 2018	Added revision history	Nova VanderSlagt
7	Nov 7, 2018	Revised to include the CMMS and the revision of the 10-year capital plan.	Nova VanderSlagt
8	July 28, 2023	Revised wording from "backflow calibration" to "backflow testing".	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 16
		<b>Revision: #</b>	Rev. 3
		<b>Title:</b>	Sampling, Testing and Monitoring
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

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### **ELEMENT 16: SAMPLING, TESTING, AND MONITORING**



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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**

Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 17
		<b>Revision: #</b>	Rev. 3
		<b>Title:</b>	Measurement and Recording Equipment Calibration and Maintenance
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

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## ELEMENT 17: MEASUREMENT AND RECORDING EQUIPMENT CALIBRATION AND MAINTENANCE



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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**

Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 18
		<b>Revision: #</b>	Rev. 3
		<b>Title:</b>	Emergency Management
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

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## ELEMENT 18: EMERGENCY MANAGEMENT

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

Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 19
		<b>Revision: #</b>	Rev. 3
		<b>Title:</b>	Internal Audits
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

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## ELEMENT 19: INTERNAL AUDITS

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

Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	Oct 6, 2017	Revised header	Nova VanderSlagt
3	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 20
		<b>Revision: #</b>	Rev. 4
		<b>Title:</b>	Management Review
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

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## ELEMENT 20: MANAGEMENT REVIEW



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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**

Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Nov 15, 2011	Element clarification	Brian VanHyfte
2	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
3	Oct 6, 2017	Revised header	Nova VanderSlagt
4	Aug 23, 2018	Added revision history	Nova VanderSlagt

	<b>The Corporation of the Township of St. Clair</b>  <b>Public Works</b>  <b>QMS Operational Plan</b>	<b>QMS: #</b>	Element 21
		<b>Revision: #</b>	Rev. 5
		<b>Title:</b>	Continual Improvement
		<b>Implementation Date:</b>	February 2, 2009
<b>Approved By:</b>	Chris Westbrook	<b>Review/Update Date:</b>	August 23, 2018
<b>Signature:</b>		<b>Approval Date:</b>	November 19, 2018
<b>Location:</b>	Public Works		

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## ELEMENT 21: CONTINUAL IMPROVEMENT

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Procedure to document the tracking and measuring of continual improvement of the QMS.

Refer to **QMS Procedure -702.12 Continual Improvement**

Revision History:

Revision No.	Date	Description of Revision	Revised By
0	Feb 2, 2009	Operational Plan Issued	Brian VanHyfte
1	Dec 12, 2012	The header table has been revised and/or added to include, title, element, Municipality logo and footer to include print date and uncontrolled when printed	Connie Garrison (CH2M)
2	June 9, 2017	Clarified how corrective actions and opportunities for improvement are tracked and managed.	Nova VanderSlagt
3	Oct 6, 2017	Revised header	Nova VanderSlagt
4	Aug 17, 2018	Revised to refer to QMS procedure 702.12.	
5	Aug 23, 2018	Added revision history	Nova VanderSlagt