



# Water Operations Division



## Operational Plan

For the:

Aylmer Distribution System

MDWL #044-101

Operational Plan #044-401

# Aylmer Water Operations – Operational Plan

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# Aylmer Water Operations – Operational Plan

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## 1.0 Introduction

This operational plan describes the Aylmer Water Operations quality management system (**QMS**) that:

1. **meets the requirements** of the Drinking Water Quality Management Standard (**DWQMS**), and
2. helps ensure we **consistently achieve the intended outcomes** of our drinking water systems' processes and programs.

The Town of Aylmer is the **owner**, and the Aylmer Water Operations department is the **operating authority** for the Aylmer Distribution System.

Our operational plan, other QMS information (e.g. standard operating procedures, work instructions, forms), and training programs - all support achieving our **QMS Policy commitments to**:

- provide **safe drinking water** to consumers,
- **comply** with legislation and regulations, and
- maintain and **continually improve** our QMS.

*Organization and People sections of this manual describe:*

- the **commitments** we've made (sections 2 and 3)
- the **people** we have and their **roles, responsibilities and authorities** (section 9)
- how we ensure staff **competencies** and **coverage** (sections 10 and 11)
- the ways in which we **communicate internally** (among staff and to the owner) and **externally** (to essential suppliers and to the public) (section 12)

*System Operations and Maintenance sections describe:*

- the processes and programs we have in our **drinking water system** (section 6)
- **risks** associated with our drinking water system (sections 7 and 8)
- **supplies and services essential** to our operations and maintenance (section 13)
- ways in which we annually **review the adequacy of our infrastructure** (section 14)
- what infrastructure **maintenance, rehabilitation and renewal programs** we have (section 15)
- how we maintain a **state of emergency preparedness** (section 18)

*Support and Performance Evaluation sections describe:*

- the ways in which we manage and **control documents and records** (section 5)
- how we **sample, test, and monitor** for process control and finished water quality, with what **calibrated equipment**, and how we **share results** (sections 16 and 17)
- how we **conduct internal audits** to verify we achieved everything we should (section 19)
- the content of our **QMS reports to top management** and to the **Owner** (section 20)

*The Continual Improvement section describes:*

- how we **track and measure continual improvement** (section 21)

This operational plan is available for viewing by the public by request through the Manager of Water Operations at the Water Operations division offices, located at 32 Chipchase Court in Aylmer – and – by request through the Director of Operations at the Town of Aylmer's office, located at 46 Talbot Street West in Aylmer.

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## 2.0 Quality management system (QMS) policy

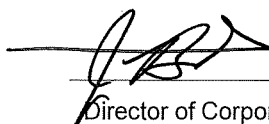
As the operating authority for the Town of Aylmer's drinking water system, the **Aylmer Water Operations department** is committed to:

- provide **safe drinking water** to consumers,
- **comply with legislation and regulations**, and
- maintain and **continually improve** the QMS.

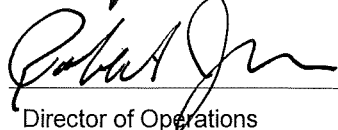
Signed this 25 th day of November, 2021 at Aylmer, Ontario.



Chief Administrative Officer



Director of Corporate Services / Clerk



Director of Operations



Manager of Water Operations

These **policy commitments are communicated** to staff and made available to the public through our website.

## 3.0 Commitment and endorsement

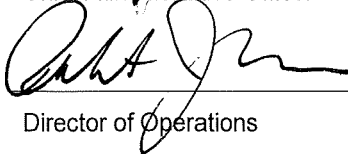
As decision-makers for the drinking water systems and representatives of **top management**, we are committed to:

- a) ensuring that **an effective QMS** is in place that meets the requirements of the **DWQMS**,
- b) ensuring that the operating authority is **aware of all applicable legislative and regulatory requirements**,
- c) **communicating the QMS** according to the procedure for communications, and
- d) determining, obtaining, or **providing the resources needed** to maintain and **continually improve** the QMS.

Signed this 25 th day of November, 2021 at Aylmer, Ontario.



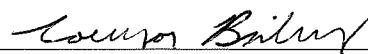
Chief Administrative Officer



Director of Operations



Director of Corporate Services / Clerk



Manager of Water Operations

Endorsement by the Owner is obtained through **council resolution** with each new council.

This page's signatures are **updated within six months of changes** to top management.

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## 4.0 QMS representative

The **Manager of Water Operations** is appointed as the Quality Management System (QMS) Representative.

Irrespective of other responsibilities, the **QMS Representative**:

- a) administers the QMS by ensuring that **processes and procedures needed for the QMS** are established and maintained,
- b) **reports to Top Management** on the performance of the QMS and any need for improvement,
- c) **ensures** that **current versions of documents** required by the QMS are being used at all times,
- d) ensures that **personnel are aware of all applicable legislative and regulatory requirements** that pertain to their duties for the operation of the drinking water systems, and
- e) **promotes awareness of the QMS** throughout the operating authority.

An annual QMS Schedule is prepared and updated by the QMS Representative for the following year.

## 5.0 Document and records control

The Town of Aylmer Water Operations division's documented information for the QMS includes this operational plan and other information deemed necessary (e.g. O&M manuals with SOP's, work instructions, forms) for the effectiveness of our QMS and to ensure the effective planning, operation and control of our operations.

Documented information also includes evidence of results achieved ("records"), and includes **records of**:

- **risk assessment** outcomes;
- **competence** (training, education and/or experience-related);
- **communications** (internal and external);
- **infrastructure review** meeting minutes;
- infrastructure **maintenance, rehabilitation and renewal**;
- **sampling, testing and monitoring**;
- **emergency** training and testing;
- **internal audits** and **external audits** (including accreditation audits and Ministry inspections);
- **management reviews**;
- **reports to the owner** (e.g. annual & summary and budget reports);
- **continual improvement**, corrective and preventive actions.

For consistency, QMS-related and instructional documents maintain consistent **features**, including the following:

- **identification** and description (e.g. title, revision date, such as in this document's header and footer)
- **format** (e.g. legible, and using a standard format for instructions, e.g. **QMS 05-01 Document template**)
- **media** (e.g. available electronically and/or on paper)
- **reviewed** and approved for **currency**, suitability, adequacy
  - Any employee can request new documents or changes to existing documents. The QMS Rep evaluates the request and ensures integrity of the QMS when approving changes or new documents.

Related to controlling documents and records, we ensure they are available **where and when needed** and are adequately **protected** (e.g. from loss of confidentiality, improper use, or loss of integrity).

We **ensure** that our **documents** and **records** are:

- **distributed and accessible**, where required (e.g. at Water Operations and/or QMS Rep's office)
- easily **retrieved** (e.g. whether in hard copy binders or from electronic locations)
- **used**, as required (e.g. latest QMS version)
- **stored, preserved, and legible** (e.g. no pencil or other erasable marker; clearly identifying person recording)

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- changes **controlled** (e.g. through QMS Representative, who approve changes)
- **retained** for as long as retention timelines dictate (e.g. properly dated and stored by record type)
- **disposed of** once their retention requirements have been fulfilled

External documents, such as those issued through government regulations and approvals, are controlled and identified to ensure our personnel have access to such compliance obligations. We ensure these requirements are integrated into our documents and record-keeping so that we can provide evidence that we've met these obligations.

Please refer to **Appendix "A"** for a listing of documents and records of internal and external origin, their locations and retention times, as applicable.

## 6.0 Drinking water systems

The Town of Aylmer is the **owner** and the Aylmer Water Operations division is the **operating authority** for the Aylmer Distribution System. This section provides an overview of the drinking water system.

### 6.1 AYLMER DISTRIBUTION SYSTEM

The Aylmer Distribution System is a Class I water distribution system owned by the Town of Aylmer and operated by the Aylmer Water Operations division.

#### Distribution system

The Aylmer Distribution System consists of approximately 42 kilometres of watermain of varying sizes (50 mm to 450 mm) and types (cast iron, ductile iron, DR-18 plastic, transite). There are approximately 2,860 service connections in the Town of Aylmer, nine meter chambers, 215 fire hydrants and approximately 370 street valves within the system.

A schematic of the Aylmer Distribution System is maintained by the Aylmer Water Operations Staff. Sodium hypochlorite (12%) is used to disinfect repaired and newly installed water mains.

#### Procedures in place to maintain disinfection residuals

To maintain chlorine residuals in the system, practices and procedures have been adopted including the use of our risk assessment outcomes, hydrant operational procedures (SOP #6) and dead-end flushing procedures (SOP #27).

#### Connections to other drinking water systems

The Aylmer Distribution System receives its treated water from the Elgin Area Primary Water Supply System (EAPWSS) that is owned by the EAPWSS Board of Management and operated by the Ontario Clean Water Agency (OCWA). Water is supplied to Aylmer from the Aylmer Area Secondary Water Supply System (AASWSS).

The EAPWSS Board Member Municipalities include: City of London (Administering Municipality), Town of Aylmer, Municipality of Bayham, Municipality of Central Elgin, Municipality of Dutton Dunwich, Township of Malahide, City of St. Thomas, and Township of Southwold.

The EAPWSS obtains raw water from Lake Erie and treats it at the Elgin Area Water Treatment Plant (located East of Port Stanley) so that safe drinking water is provided to all consumers and Ministry of the Environment, Conservation and Parks (MECP) compliance requirements are consistently met.

Water quality reports are provided to the Town of Aylmer, and available to its consumers at the following webpage, under "Elgin Area Primary Water Supply System Annual Reports":

<https://www.aylmer.ca/index.php/Operations/WaterAndWasteWater>. The water quality reports include up-to-date information on raw water quality, treatment process descriptions and treated water quality.

The Aylmer Distribution System is provided treated water from the EAPWSS through the Elgin-Middlesex Pumping Station located in the Municipality of Central Elgin (that encompasses twin celled reservoir, booster pumps and where

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water is re-chlorinated with a gas chlorine system) and the Aylmer Area Secondary Water Supply System through a 450 mm dia. secondary transmission main.

The transmission main leaves the Elgin-Middlesex Pumping Station and proceeds along the north side of Hwy #3, through the Municipality of Central Elgin and Malahide Township until it connects to the Aylmer Distribution System at Bodkin Ave (valve chamber 16).

Depending on system pressure and demand, the Aylmer Area Secondary Water Supply System may be used to directly feed the distribution system or may be used to fill a 4,300 m<sup>3</sup> standpipe located at 23 Myrtle Street. There is a continuous chlorine monitor, a tower level indicator and a pressure sensor located at the standpipe. The analyzers are connected to SCADA monitored by the Aylmer Water Operations division and by the EAPWSS.

Drinking water from the Aylmer Distribution System connects to the Malahide Distribution System at two connections (Dingle Street and Talbot Street East) at the municipal boundary.

Please refer to **Appendix “B”** for the Aylmer Distribution System schematic that describes these inter-connections.

## **Common event-driven fluctuations and any resulting operational challenges and threats**

Although water is treated and supplied by others, the following operational challenges/threats do exist with respect to the production of drinking water:

- Main Breaks: Aylmer's distribution system is supplied by a single main. (Refer to SOP #21, Section Q)
- Failure/Absence of backflow prevention devices. (Refer to Town of Aylmer Comprehensive Water By-Law 09-09)

In an emergency, water can be supplied from the City of London which receives water from the Elgin Area Primary Water Supply System and the Lake Huron Primary Water Supply System.



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## 7.0 Risk assessment

At least once every calendar year, the Aylmer Water Operations division conducts a review of the currency of information and validity of the assumptions used in the risk assessment. The updated risk assessment outcomes are presented at the next Management Review meeting for review and approval.

As applicable, each of the drinking water system's process and program steps from source water to consumers' taps are evaluated for risks of failure (including a review of potential failures related to water supply and water distribution).

At least once every thirty-six months, the Aylmer Water Operations division re-assesses drinking water system risks using the risk rating criteria included below (adding ratings for likelihood, consequence and capability of responding).

Likelihood		Severity		Detectability	
1	<b>Rare</b> - Has occurred or may occur less frequently than once every 10 years, given the existing control measures.	1	<b>Insignificant</b> - Insignificant or no: service interruption to customers (<5%) or loss of available water supply (temporary, and low volume impact), or insignificant or no public notification.	1	<b>Excellent</b> - Excellent ability to respond in comparison to best practices, considering resources available <sup>i</sup> .
2	<b>Unlikely</b> - Has occurred or may occur approximately once every 5- to 10-year period, given the existing control measures	2	<b>Minor</b> - Localized minor: service interruption to customers (5-15%) or loss of available water supply, or localized public notification.	2	<b>Very Good</b> - Very Good ability to respond, considering resources available <sup>i</sup> .
3	<b>Possible</b> - Has occurred or may occur approximately once per 5-year period, given the existing control measures.	3	<b>Moderate</b> - Localized major / widespread minor: service interruption to customers (16-30%), loss of available water supply and/or illness, or city-wide media coverage.	3	<b>Good</b> - Good ability to respond, considering resources available <sup>i</sup> .
4	<b>Likely</b> - Has occurred or may occur approximately once per year, given the existing control measures.	4	<b>Major</b> - Widespread major: service interruption to customers (31-50%), loss of available water supply and/or illness, or province-wide media coverage.	4	<b>Fair</b> - Fair ability to respond, considering resources available <sup>i</sup> .
5	<b>Very likely</b> - Has occurred or may occur approximately once per month, given the existing control measures.	5	<b>Catastrophic</b> - service interruption to customers (>50%), loss of available water supply and/or illness, or national and/or international media coverage.	5	<b>Poor</b> - Poor ability to respond, considering resources available <sup>i</sup> .

<sup>i</sup> Resources available include qualified staff, essential supplies, and services (e.g. equipment, materials, consultants and contractors).

The purpose of the risk assessment is to:

- **identify** potential **hazardous events** and associated **hazards**,
- **assess the risks** associated with the **occurrence** of the hazardous events,
- **rank** the hazardous events according to the associated risk,
- **identify control measures** to address the potential hazards and hazardous events,



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- **identify critical control points**, and
- **identify response procedures** when an identified risk cannot be controlled.

Consideration of the potential hazardous events and associated hazards from the document titled "[Potential Hazardous Events for Municipal Residential Drinking Water Systems](#)" is included in the risk assessment process.

When reviewing the currency of the risk assessment information, the following may be considered:

- a) process changes.
- b) changes in reliability and redundancy of equipment.
- c) the occurrence of emergency events.
- d) the occurrence of deviations from critical control limits.
- e) non-conformities identified in the QMS or related to standard operating procedures.

A high risk is considered to be a risk assessment score of **12** or higher.

The recommended **minimum critical control points** are **related to disinfection** requirements; and therefore, regardless of risk assessment scores, any items related to **disinfection** are **automatically considered Critical Control Points**.

## 8.0 Risk assessment outcomes

The outcome of the risk assessment process is summarized in the [QMS 08 Risk assessment outcomes](#) record which documents:

- a) the identified potential **hazardous events and associated hazards**,
- b) the **assessed risks** associated with the occurrence of the hazardous events,
- c) the **ranked** hazardous events,
- d) the identified **control measures** to address the potential hazards and hazardous events,
- e) the identified **critical control points** (CCP's) and their respective **critical control limits** (CCL's),
- f) procedures and/or processes to **monitor the CCL's**,
- g) procedures to **respond to deviations** from CCL's, and
- h) procedures for **reporting and recording deviations** from CCL's.

### 8.1 CRITICAL CONTROL POINT AND CRITICAL CONTROL LIMIT

The **Critical control point** (CCP) identified in the risk assessment and its respective critical control limit (CCL) is summarized in the following tables:

Aylmer Distribution System			
CCP	Condition	High CCL	Low CCL
Distribution System Chlorine Residual	Low distribution system chlorine residual – addressed through flushing programs (regular and seasonal)	NA	0.2 mg/L

The procedure listed below describe how the CCL is **monitored** and include **response procedures** for when the **CCL is reached** related to the following situations:

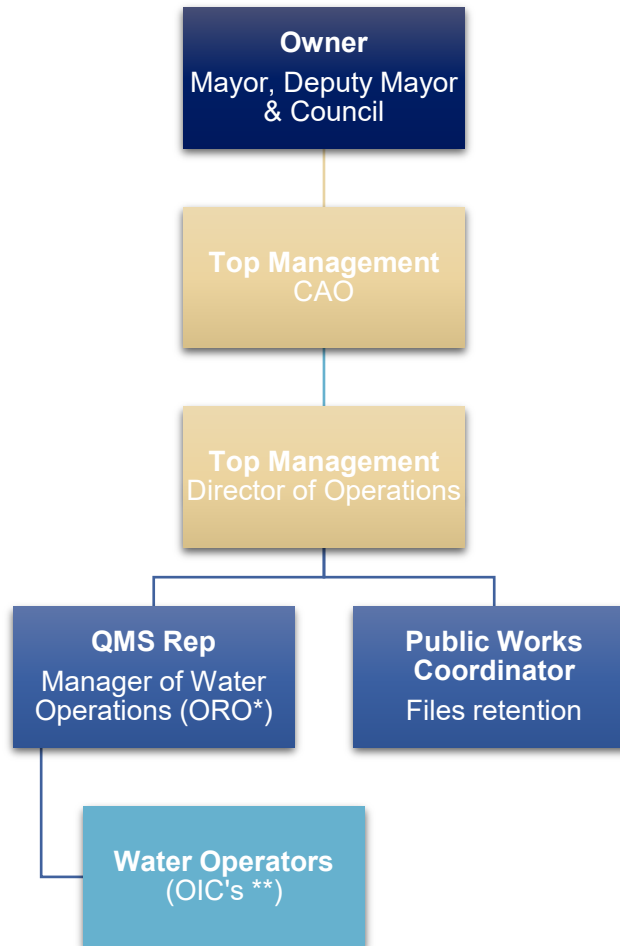
- Low distribution system chlorine residual (SOP #27)

Requirements for **reporting and recording deviations** from the CCL are included in the CCL response procedure.

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## 9.0 Organizational roles, responsibilities, and authorities

The organizational structure related to the Aylmer Water Operations division is depicted below:



\***ORO** – Overall Responsible Operator; \*\***OIC** – Operator-in-charge

The QMS Representative ensures that the responsibilities and authorities for the relevant roles are assigned and communicated throughout the organization (to the owner and operating authority personnel).

The Town of Aylmer's and the Aylmer Water Operations division's roles, responsibilities and authorities related to provision of safe drinking water are described below:

Role	Responsibilities	Authorities
Owner – Mayor, Deputy Mayor & Council	Understand personal responsibilities under Section 19 of Safe Drinking Water Act, 2002, "Standard of Care".  Provide the resources needed to maintain and continually improve the drinking water system (DWS) and quality management system (QMS).  Ensure the operating authority is accredited.	Report to the public on matters required by legislation.

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Role	Responsibilities	Authorities
	Make decisions based on OA reports to Owner.	
Top Management – Chief Administrative Officer (CAO)	<p>Understand personal responsibilities under Section 19 of Safe Drinking Water Act, 2002, “Standard of Care”.</p> <p>Carry-out the commitments described in sections 2 and 3 of this operational plan.</p> <p>Participate in Management Reviews.</p>	<p>Report to council and the public.</p> <p>Make recommendations to the Owner ensuring the necessary DWS / QMS resources are provided.</p>
Top Management – Director of Operations	<p>Understand personal responsibilities under Section 19 of Safe Drinking Water Act, 2002, “Standard of Care”.</p> <p>Carry-out the commitments described in sections 2 and 3 of this operational plan.</p> <p>Participate in Management Reviews.</p> <p>Ensure any person authorized to carry-out work on or to operate any aspect of the drinking water system has been informed of the SDWA, applicable regulations, the MDWL, DWWP and ensure they comply.</p>	<p>Report to Owner and CAO.</p> <p>Make recommendations to the Owner ensuring the necessary DWS / QMS resources are provided.</p> <p>Strategic financial and HR decisions within the scope of approved budgets and by-laws.</p> <p>Prioritize and coordinate drinking water system improvement projects.</p>
QMS Representative – Manager of Water Operations (ORO)	<p>Carry-out the commitments and responsibilities described in ss. 2 and 4 of this operational plan.</p> <p>Act as ORO, oversee DWS operations &amp; maintenance.</p> <p>Present reports for Management Reviews.</p> <p>Ensure any person authorized to carry-out work on or to operate any aspect of the drinking water system has been informed of the SDWA, applicable regulations, the MDWL, DWWP and ensure they comply.</p>	<p>Report to MECP and local MOH.</p> <p>Supervise and coordinate day-to-day work of water operators and other staff.</p> <p>Coordinate Water Operator training.</p> <p>Represent Operating Authority in inspections and source protection activities.</p> <p>Prioritize and coordinate drinking water system improvement projects.</p>
OIC's – Water Operators	<p>Carry-out work in line with QMS Policy commitments.</p> <p>Operate and maintain distribution system safely in accordance with requirements.</p> <p>Keep records of all activities (e.g. logbook entries, notes of computer records review) as required.</p> <p>Ensure any person authorized to carry-out work on or to operate any aspect of the drinking water system has been informed of the SDWA, applicable regulations, the MDWL, DWWP and ensure they comply.</p>	<p>Evaluate and test programs and equipment to optimize performance</p> <p>Make operational decisions: respond to adverse conditions, alarms, and report as required.</p>
Public Works Coordinator	<p>Carry-out work in line with QMS Policy commitments.</p> <p>Keep records organized (e.g. QMS-related, Operator Training &amp; Certification-related).</p>	<p>Assists with scheduling training for Operators on an ongoing basis.</p>

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Role	Responsibilities	Authorities
	Provide administrative support to the ORO and QMS Representative.	

## 10.0 Competencies

Competencies required for personnel performing duties directly affecting drinking water quality are described below:

Overall Responsible Operator	Operators-in-Charge
Min. Class I Water Distribution w/ CEU's, training. Supervisory / ORO experience, driver's licence. Awareness of all applicable H&S, policies, procedures, standards, SDWA & regulations for the provision of safe drinking water, DWQMS, Town by-laws, emergencies.	Min. Class I Water Distribution w/ CEU's, training. Mechanical aptitude, read drawings, driver's licence. Awareness of all applicable H&S, policies, procedures, standards, SDWA & regulations for the provision of safe drinking water, DWQMS, Town by-laws, emergencies.

**Competency records** are retained by the QMS Representative and used for operator certification renewals or upgrades.

The Town of Aylmer recognizes the value of **training and development** of its employees. Furthermore, it is recognized that continuing education is a requirement for certified and licensed staff of the Aylmer Water Operations division. The responsibility for such training lies not only with the employer, but also with the individual.

All Aylmer Water Operations division operators may attend annual training sessions provided by the Elgin Area Primary Water Supply System (EAPWSS) that is owned by the EAPWSS Board of Management. This optional training is offered to all local water distribution operations. Additional training is provided on an as required basis to ensure that the operations personnel are able to maintain all required certifications as well as to enhance their overall capabilities.

Providing this training to all operators:

- ensures consistency of knowledge
- allows the operators to meet their regulatory requirements
- updates current knowledge regarding water distribution systems
- helps to assure quality and safety of the product and service to the customer

Water distribution personnel are also provided with:

- initial QMS training and subsequent annual refresher training
- Emergency Preparedness training
- equipment training on an as-needed basis

All training is scheduled, documented and recorded by the Public Works Coordinator or the QMS representative as proof that the required training has been successfully completed.

The Aylmer Water Operations division may administer certain tests, conduct interviews, verify references and/or request specific documentation as part of the hiring process in order to verify skills, experience and knowledge.

In order to meet the ongoing changes to technology, software, the requirements of applicable legislation, and water operations processes, all operators shall receive training as required by compliance obligations. The training may be provided by qualified employees or contracted subject matter experts.

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The **QMS 10-01 On-the-job practical training form** is used to track on-the-job practical staff training. CEU-accredited training providers issue training certificates as the record of training.

Activities to ensure that personnel are aware of the relevance of their duties and how they affect safe drinking water include: providing access to training on relevant legislation and related regulations; staff meetings and orientation sessions reminding staff of roles and responsibilities related to QMS Policy commitments; and conducting internal audits with staff and interviewing them about the relevance of their duties and how they affect safe drinking water.

## 11.0 Personnel coverage

This section describes the coverage provided for Aylmer Water Operations division 24 hours a day, 7 days a week. Normal working hours are from Monday through Friday, 7:00 am to 4:00 pm.

- The Aylmer Water Operations division is staffed daily by water operators (**Operators-in-charge**, or “**OIC’s**”) on a rotating basis.
- The **Overall Responsible Operator (ORO)** is the Manager of Water Operations. The ORO must be always available to direct OIC’s on the operations of the system and to respond immediately and effectively to emergencies.
- In the event the ORO is not available, a qualified water operator holding a Class I Distribution certificate will be designated ORO.

### After-hours / weekends/ statutory holiday coverage

- The drinking water systems (i.e. transmission mains upstream of the Aylmer Distribution System and EMPS) are controlled and monitored by SCADA. Any alarm condition is routed to an automated dialer that is programmed with both on call, and home telephone numbers of the Aylmer Water Operations division staff.
- A water operator (OIC) is on stand-by based on a weekly rotation. The stand-by operator takes the necessary actions to investigate and address any alarm conditions.
- The Manager is the ORO. In the event the Manager is not available, a designated water operator is the ORO.
- An emergency Aylmer Water Operations contact number directed to a 24-hour answering service is available to the public. Spectrum Communications answering service in turn has the emergency contact information for appropriate staff.
- Weekend and Statutory Holiday coverage/ sampling are the responsibility of the designated stand-by operator.

### Emergency and vacation coverage

- The Manager (ORO) ensures that coverage of the Aylmer Water Operations is continuous: 24 hours/day, 7 days/week.
- One designated ORO is available on-call 24 hours/day, 7 days/week. An alternate ORO will be designated as required. The name of the ORO is recorded daily in the logbook.
- Emergency contact information is kept up-to-date by the QMS Representative and made available to all team members.
- A Mutual Aid and Assistance Agreement is in place with Elgin County to adequately cover staffing levels should any emergency situations arise, such as: illness, pandemic, inclement weather, injury, planned or unplanned absences, training, work stoppages, etc.
- All emergency activities are recorded in the on-call operator’s logbook.
- Short-staffing scenarios (e.g. pandemics) are addressed through the Town’s Comprehensive Pandemic Plan and OnWARN (the Ontario Water / Wastewater Agency Response Network, [www.onwarn.org](http://www.onwarn.org)).

## 12.0 Communications

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This section describes how the Aylmer Water Operations division communicates the Quality Management System (QMS) **between top management and** the Owner, operating authority personnel, essential suppliers and service providers, and the public.

## The owner

- Over the course of the year, top management communicates with the owner on a number of items, including: the Annual & Summary report (by March 31<sup>st</sup> every year), capital and operational budgets (when budget requests are due each year), about emergencies and health-related adverse conditions (as they occur).

## Employees

- The Overall Responsible Operator communicates regularly with water operators about their schedules, task assignments, updates to procedures, training opportunities, etc.

## Essential suppliers and service providers

- All essential suppliers and service providers receive details on what is expected by the Aylmer Water Operations division through the purchase of supplies and/or services (e.g. describing required specifications, item sizes, numbers of, arrangements for delivery, etc.).

## The public

- The public receives timely information about the drinking water systems' activities, such as: watermain breaks, flushing activities, pressure issues, water advisories, etc.
- The Aylmer Water Operations webpage provides instructions on how to report a problem (including phone numbers and e-mail for the ORO); about line flushing maintenance activities; the Water Financial Plan; by-laws related to water usage; annual reports; and results of Ministry inspections.

## Reporting adverse water quality incidents (AWQI's)

AWQI's must be reported when:

- laboratory tests indicate an adverse test result; or
- the operating authority observes an adverse water quality incident.

The AWQI reporting procedure consists of three parts: 1. Oral notification; 2. Written notification; and 3. Notice of issue resolution.

### 1. ORAL NOTIFICATION

The OIC/ORO must perform the tasks below in the order they appear. Times of calls and full names of representatives spoken to must be written down.

- Notify the Health Unit, by speaking directly to a person, to report the incident and receive corrective action instructions.
- Notify SAC, by speaking directly to a person, to report the incident. Provide information given by the Health Unit and receive an AWQI number.

Both authorities listed above may have additional instructions which are to be recorded and followed.

	Phone	Fax	email
Local MOH	██████████	██████████	1230 Talbot Street St. Thomas, ON N5P 1G9
MECP SAC	██████████	██████████	<a href="mailto:awqi.reporting@ontario.ca">awqi.reporting@ontario.ca</a>

# Aylmer Water Operations – Operational Plan

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## 2. WRITTEN NOTIFICATION

Within 24 hours of oral notification, the OIC/ORO must fill out Section 2A of the “[MECP’s Notices of Adverse Test Results and Issue Resolution form \(Form 4444e\)](#)” (which also can be accessed at [www.forms.ssb.gov.on.ca](http://www.forms.ssb.gov.on.ca), and searching form 4444E). All asterisked boxes on Section 2A of the form are mandatory. This form must be faxed or emailed to the Health Unit and SAC.

## 3. NOTICE OF ISSUE RESOLUTION

Within 7 days of incident resolution, the OIC/ORO must fill out Section 2B of the “Notice of Adverse Test Results and Issue Resolution” form. All asterisked boxes on Section 2B of the form are mandatory. This form must be faxed or emailed to the Health Unit and SAC.

## 13.0 Essential supplies and services

Supplies and services essential for the delivery of safe drinking water have been identified in [Appendix “C”](#).

The following information is included as it relates to each of the essential supplies and services:

- **identification** of the essential supply or service,
- **how procurement** of these is **ensured**,
- **providers’ contact information** of essential supplies and services, and
- description of the **quality requirements** for each.

Operators **verify quality requirements** are met with each delivery of and provision of essential supplies and services. When quality requirements are not met, the Operator contacts the provider directly so that **corrective action** is initiated. Contact information for supplies and services that may be used in emergencies are also included in the water emergency plan.

## 14.0 Review and provision of infrastructure

At least once per calendar year, Aylmer Water Operations division prepares capital and operational budgets and presents these to Town of Aylmer council.

Capital budget items are selected through risk-based decisions made by reviewing: the latest risk assessment outcomes; any issues related to the drinking water system’s reliability and redundancy; infrastructure conditions (e.g. age, failure, material, sizing, etc.); MECP inspection reports; water quality trends; consumer complaints; growth considerations; and any long-term infrastructure and asset management plans available.

The prioritization of capital budget items is documented using the [QMS 14-01 Infrastructure Review Meeting](#) template.

The program is reviewed with operating authority staff and presented to Town of Aylmer council by the Director of Operations during budget deliberations.

Upon approval of the plan, the Manager begins the process of implementing the approved recommendations over the course of the fiscal year.

## 15.0 Infrastructure maintenance, rehabilitation and renewal

A summary of Aylmer Water Operations division’s infrastructure maintenance, rehabilitation and renewal programs is available through a scheduled program of inspection and maintenance (including watermain repairs and replacements, hydrant flushing, valve exercising, equipment repairs and replacements).



# Aylmer Water Operations – Operational Plan

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- Hydrant flushing program is conducted annually. Every hydrant in the system is operated and flow tested to meet fire code requirements.
- Dead end flushing occurs every spring. Hydrants and blow offs are operated and checked for chlorine residual every April.
- Lead sampling program. The Aylmer Distribution System is sampled twice annually (spring and fall) for lead residuals to comply with government regulations.
- Along with the weekly bacti sampling, the Town samples the system quarterly for trihalomethanes to comply with government regulations.
- A valve exercising maintenance program is instituted as required whereby a portion of the system's valves are operated annually and the results documented.

System upgrades and rehabilitation projects are identified through asset management plan, risk assessments, and a five-year rolling plan that is reviewed once every calendar year by members of Top Management.

When equipment or systems breakdown, **reactive maintenance** is carried-out and records are maintained using the work order system.

**Larger and longer-term maintenance activities** that are carried out less frequently (e.g. road reconstruction projects) are tracked through asset management plans.

Aylmer Water Operations Top Management communicate the **summary of** and report on **the effectiveness of** regular and long-term infrastructure maintenance, rehabilitation and renewal programs to Town of Aylmer council **at least once per calendar year** through the annual budget process and through annual water quality reports.

Effectiveness of maintenance programs can be determined by:

- The number maintenance activities in a given time period.
- The frequency of unplanned maintenance activities.
- The costs and cost comparisons, such as the costs of planned-to-unplanned, or costs-per infrastructure.

## 16.0 Sampling, testing and monitoring

The sampling, testing and monitoring programs are carried out to provide operators with knowledge to **proactively operate** the drinking water system; **ensure water quality** is maintained; and **ensure compliance obligations** are met.

### **Upstream sampling, testing and monitoring**

Sampling, testing and monitoring of the treated water produced at the Elgin Water Treatment Plant and supplied through the Elgin Area Primary Water Supply System, the Elgin Middlesex Reservoir, and the Aylmer Area Secondary Water Supply System is **conducted by its operators (OCWA)** as required by O. Reg. 170/03. They ensure that the water provided to the Town of Aylmer meets **Ontario Drinking Water Quality Standards (ODWQS)**.

**SCADA monitoring by OCWA** is responsible for generating all alarms at the Aylmer Standpipe. All alarms are sent to the **ORO's cell phone** and include standpipe tower levels (high & low), CL2 residuals, electrical power and PLC Communications. SCADA monitoring also records flow rates from the EMPS and at Meter Chamber 16. SCADA information is viewed daily by the ORO and the Aylmer Standpipe building is visited daily for inspection.

The Duty Operator at the Water Treatment Plant (WTP) is contacted immediately whenever there is an alarm. The ORO shall respond to all alarms when notified by either the SCADA System or the Duty Operator at the WTP

Flow monitoring information is typically shared through the presentation of the Annual Report to Council

### **Routine Sampling**

# Aylmer Water Operations – Operational Plan

Sampling requirements are **planned by the ORO** and carried-out by operational staff. All staff who sample, test and monitor for water quality have **received appropriate training and are qualified** to do so.

Sampling and testing for the Aylmer Distribution System is limited to the **distribution system** as required by Ontario Regulation 170/03.

Sampling is conducted as per the **sampling plan** contained in the **Operations Manual**. Samples are tested by an **accredited laboratory** except for chlorine residuals.

The Manager of Water Operations **reviews and updates the sampling plan** on an annual basis and reviews the **current population, new locations, legislative requirements** and the **number of samples** being taken. Any changes are forwarded to the laboratory. Any new locations are shown on the sampling plan held in the Manager of Water Operations office.

Sterile **sample bottles** are received from the **accredited laboratory**. Samples for external testing are taken and protected and marked as per the laboratory's protocol.

Samples are **delivered to the laboratory** within time intervals specified by the laboratory/regulations by Aylmer Water Operations division employees.

Aylmer Water Operations staff complete **chlorine residual sampling** per the **sampling plan** using calibrated / standardized Hach kits.

**Chlorine residual sampling and testing** shall be done as per Hach kit instructions – Chlorine Residual Testing.

The Manager of Water Operations, or designate, initials the **Chlorine Residuals for Weekly Samples** form after each day's test to ensure results are satisfactory and that time criteria is met. The Manager of Water Operations files the completed forms.

Sample Location/Address	Sample Frequency
8 Parkview Heights	Weekly
42 South St E	Weekly
E.E.C.C. 531 Talbot Street West	Weekly
32 Chipchase Court	Weekly
323 John St S.	Weekly
Fire Hall 323 John St S (THM's)	Quarterly
8 Parkview Heights (HAA's)	Quarterly

**Additional** sampling may be conducted for **challenging conditions** in addition to the regular schedule to account for out-of-ordinary conditions (e.g. sudden changes due to extreme weather); or may be requested related to projects.

## **Chlorine Residuals - Sampling After Maintenance**

When an existing watermain has been repaired, an Operator shall thoroughly clean, disinfect and test for chlorine residual before returning the main into service, in accordance with the MECP's Watermain Disinfection Procedure.

Chlorine residual sampling and testing shall be done as per Hach kit instructions – Chlorine Residual Testing.

The chlorine residuals are recorded and provided to the Manager of Water Operations and filed with the main break record.

# Aylmer Water Operations – Operational Plan

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## ***Chlorine Residuals - Sampling for New Watermains***

**New watermains** are installed by contractors. **Aylmer supervises** the cleaning and disinfection. The Watermain Disinfection Procedure developed by the MECP must be used by contractors when disinfecting new watermains.

After waiting 16 hours from the end of the de-chlorination process Aylmer staff shall take 2 sets of samples 15 minutes apart and have the samples analyzed by an accredited lab for E. coli and total coliforms before allowing connection to the town system.

The test results are provided by the accredited laboratory to the Manager of Water Operations who shall retain the results.

The Manager of Water Operations shall include the new main on the sampling plan.

**Records of sampling, testing and monitoring activities** are reviewed and maintained by the Manager of Water Operations to ensure compliance obligations and safe drinking water quality requirements are consistently met.

## **Communication**

The sampling and testing results are summarized in the annual report. As required by regulation, the Town of Aylmer is provided with a copy of the **Annual & Summary Report** which includes these results.

More immediate communications of sampling and testing results take place when **adverse water quality incidents** are identified (see section 12.0 Communications).

## **17.0 Measurement and recording equipment calibration and maintenance**

**Calibration, verification, and maintenance** of measurement and recording equipment is described in this section.

- Measuring and recording equipment is provided and maintained by a **qualified third-party service provider**.
- The **certificates of calibration and/or records of verification** are retained on file, and the instruments bear a record of the **most recent calibration / verification date**.
- The ORO or designate is responsible for coordinating a **qualified third-party** for the required calibration and / or verification of the measurement and recording equipment.

Aylmer Water Operations division operators maintain and calibrate the equipment by following the manufacturer's documented instructions for:

- Hach DR/980 Colorimeter
- ProMinent Controller DULCOMETER dialog DACb Chlorine Analyzer
- Hach PocketPro PH Meter
- Hach Pocket-Colorimeter
- IGPC Water Meters
- Water Standpipe Pressure Sensor
- Water Standpipe Corrosion Sensor

All calibrations are recorded in the daily logbook and filed with the Manager of Water Operations.

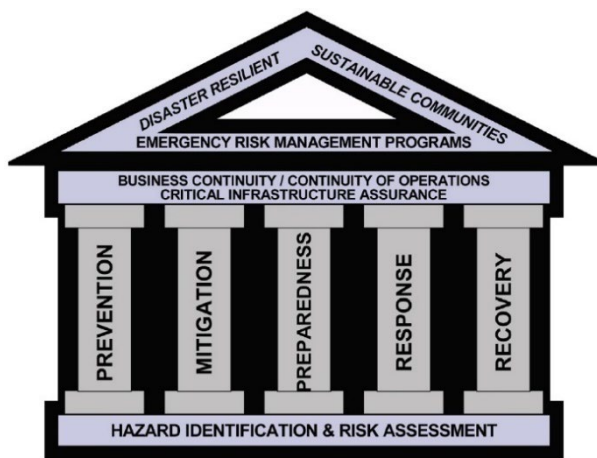
## **18.0 Emergency management**

We maintain a **state of emergency preparedness** by:

# Aylmer Water Operations – Operational Plan

- a) maintaining a list of potential emergency situations or service interruptions (see **QMS 08 Risk assessment outcomes**) such as loss of power, contamination, transmission line or major watermain breaks, water tower or SCADA failure, major fires, pandemic, terrorism, interruptions in pressure, etc.,
- b) identifying processes for emergency response and recovery,
- c) conducting **emergency training and testing** activities,
- d) identifying Town of Aylmer and Aylmer Water Operations division **responsibilities** during emergency situations,
- e) referring to **municipal emergency planning** measures for larger-scale incidents, and
- f) having an **emergency communication protocol** in place and an up-to-date **list of emergency contacts**.

For potential environmental emergencies, Emergency Management Ontario's five core components of emergency management are considered:



- **Prevention** – actions taken to prevent an emergency or disaster.
- **Mitigation** – actions taken to reduce the effects of an emergency or disaster.
- **Preparedness** – actions taken prior to an emergency or disaster to ensure an effective response.
- **Response** – actions taken to respond to an emergency or disaster.
- **Recovery** – actions taken to recover from an emergency or disaster.

In the context of our QMS, “emergencies or disasters” can contribute to potential adverse impacts.

Where possible, we plan actions to **prevent** or **mitigate** these adverse impacts and their consequences.

Where we cannot prevent or mitigate impacts and their consequences; we prepare **planned response actions** (through SOP's) in advance of an emergency to ensure we are effective in our response.

When emergencies do occur, we **respond** and take actions to **recover** from them (returning to normal operations).

In order to be prepared for potential emergencies, we **share our SOP's** with staff, interested parties and persons working under our control; **periodically test** our planned response actions and **train** our staff.

When emergency situations arise, we take the opportunity to assemble a cross-functional team to host a **debrief session** which includes the discussion of the following key questions:

- 1 **Why** did the emergency event / failure occur?
- 2 What **went well?** (to identify which practices and planned actions we should continue with)
- 3 What **didn't go well?** (to identify opportunities for improvement so that we are better prepared in a similar situation in the future)
- 4 Other **opportunities for improvement** / lessons learned.

The information gained from the debrief session would then contribute to the **review and revision** of emergency plans and contribute to continual improvement of emergency preparedness and response.

## 19.0 Internal audits

We conduct internal audits **at least once every calendar year** to provide information on **whether our QMS**:

# Aylmer Water Operations – Operational Plan

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- **conforms** to our own QMS requirements and to the requirements of the Drinking Water Quality Management Standard (DWQMS); and
- is **effectively implemented and maintained**.

At a minimum, the **audit criteria** includes the DWQMS. Various elements of the DWQMS can be evaluated as part of each internal audit conducted, as it applies to the specific process or program being audited.

The **scope** of the internal audit considers existing situations (e.g. system weaknesses have been recognized; process failures or emergency situations have occurred) as well as the original plan for auditing drinking water system processes and programs.

The standard for conducting management system audits, **ISO 19011:2018 Guidelines for auditing management systems** is used as the method to carry-out internal audits. If a sector-specific internal audit training program is available, the methods presented in the training program can also be followed (e.g. Internal auditing for the DWQMS).

**For each internal audit conducted**, we:

- define what **processes and programs** form part of that **audit's criteria and scope**;
- **select auditors** and conduct audits so that we **ensure objectivity and impartiality** of the audit process (for example, no one is auditing their own work);
- **review previous** internal and external **audit results** (to ensure previous actions taken continue to be effective); and
- ensure that **results of audits are reported** (through Management Review meetings).

Following each audit conducted, an **internal audit report** is prepared as the record of the audit. The audit report summarizes details of the audit conducted, along with the summary of findings, as applicable: positive findings, non-conformities, and opportunities for improvement.

The **findings summarized** in the internal audit report are linked to the **continual improvement system** (see section 21.0). Any non-conformities and opportunities for improvement identified through the internal audit are recorded in the **continual improvement report and tracking system** established under section 21.0. A future internal and external audit will review the effectiveness of these actions taken.

## 20.0 Management review

Top management reviews our QMS at planned intervals (at least once every calendar year) to ensure continuing **suitability, adequacy and effectiveness of our QMS**.

The QMS Representative prepares the required information using the **QMS 20-01 Management Review Meeting form** which includes consideration of items required for Management Review meetings and prompts for the required outputs of these meetings (a summary of which is documented in Management Review Meeting minutes).

### **Management Review Inputs**

The QMS Representative provides information and data relevant to the following items, for the review:

- a) incidents of regulatory non-compliance,
- b) incidents of adverse drinking water tests,
- c) deviations from critical control point limits and response actions,
- d) the effectiveness of the risk assessment process,
- e) internal and third-party party audit results,
- f) results of emergency response testing,
- g) operational performance,
- h) raw water supply and drinking water quality trends,
- i) follow-up on action items from previous management reviews.

# Aylmer Water Operations – Operational Plan

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- j) the status of management action items identified between reviews,
- k) changes that could affect the QMS,
- l) consumer feedback,
- m) the resources needed to maintain the QMS,
- n) the results of the infrastructure review,
- o) operational plan currency, content and updates, and
- p) staff suggestions.

## **Management Review Outputs**

- a) ensure management review is conducted at least once every calendar year,
- b) consider the results of the management review and identify deficiencies and action items to address the deficiencies,
- c) provide a record of any decisions and action items related to the management review including the personnel responsible for delivering the action items and the proposed timelines for their implementation, and
- d) report the results of the management review, the identified deficiencies, decisions and action items to the owner.

## 21.0 Continual improvement

We are committed to tracking and measuring continual improvement by:

- a) reviewing and considering applicable **best management practices**,
- b) documenting a process for identification and management of **QMS Corrective Actions** that includes:
  - i. **investigating the cause(s)** of an identified non-conformity,
  - ii. **documenting the action(s)** that will be taken to correct the non-conformity and prevent the non-conformity from re-occurring, and
  - iii. **reviewing the action(s)** taken to correct the non-conformity, verifying that they are **implemented and are effective** in correcting and preventing the re-occurrence of the non-conformity.
- c) documenting a process for identifying and implementing **Preventive Actions** to eliminate the occurrence of **potential non-conformities** in the QMS that includes:
  - i. **reviewing potential non-conformities** that are identified to determine if preventive actions may be necessary,
  - ii. documenting the outcome of the review, including **the action(s), if any**, that will be taken to prevent a non-conformity from occurring, and
  - iii. **reviewing the action(s)** taken to prevent a non-conformity, verifying that they are **implemented and are effective** in preventing the occurrence of the non-conformity.

We have established a spreadsheet to track and measure continual improvement, available as **QMS 21-01 Continual Improvement tracking spreadsheet**.

Awareness of best management practices can be made through discussing with neighbouring municipalities, any identified by the MECP in their inspection reports or online at, [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater), training sessions, staff suggestions, etc. Consideration of best management practices is carried-out at least once every thirty-six months.

When a non-conformity occurs or a potential non-conformity is identified, we:

- a) react to the [potential] non-conformity and, as applicable:
  - 1. take action to control and correct it;

# Aylmer Water Operations – Operational Plan

2. deal with the consequences, including mitigating adverse conditions;
- b) evaluate the need for action to eliminate the causes of the [potential] non-conformity in order that it does not recur or occur elsewhere, by:
  1. reviewing the non-conformity;
  2. determining the causes of the non-conformity;
  3. determining if similar non-conformities exist, or could potentially occur;
- c) implement any action needed;
- d) review the effectiveness of any corrective / preventive action taken;
- e) make changes to the QMS, if necessary.

Corrective and preventive actions taken are appropriate to the significance of the effects of the [potential] non-conformities encountered, including the adverse impact(s).

We retain documented information as evidence of:

- the nature of the [potential] non-conformities and any subsequent actions taken;
- the results of any corrective and preventive actions.

## Revision History

#	yyyy-mm-dd	Description	By
00	2021-04-21	Initial release of this updated Operational Plan.	C. Bailey
01	2021-05-27	Updated: s. 7.0 Risk assessment – with updated “Consequence” ratings to include percentages of customers impacted; s. 8.1 Critical control point and critical control limit with accurate information; s. 9.0 to include the Public Works Coordinator to the organization chart and roles / responsibilities / authorities table; s. 17.0 list of instruments. Added Appendix “C” details.	C. Bailey
02	2021-11-19	Updated: s. 6.0 and 6.1 – improved clarity of the description of upstream systems and Aylmer system s. 9.0 Organizational roles, responsibilities, and authorities; s. 11.0 Personnel coverage – methods used to contact operators for SCADA alarms and call out service company name	C. Bailey
03	2022-05-10	Updated Hyperlink for Comprehensive Water By-Law 09-09 In Appendix “A”. Included Drinking Water System Profile Information in External Documents Table of Appendix “A”	C. Bailey



# Aylmer Water Operations – Operational Plan

## Appendix “A” Documents and records listing

Internal Documents			
Document Title	Document # (if applicable)	Date	Location (Person Responsible) or File Path
Operational Plan	044-401	2021-05-27	QMS Rep's office (QMS Rep)
Operations & Maintenance Manuals (including equipment manuals)		Various	Water Operations (QMS Rep)
Standard Operating Procedures, Work Instructions, Forms		Various	Water Operations (QMS Rep)
Comprehensive Water By-law	09-09	2009-02-17	<a href="https://aylmer.ca/wp-content/uploads/2021/01/ComprehensiveWaterByLaw-0909.pdf">https://aylmer.ca/wp-content/uploads/2021/01/ComprehensiveWaterByLaw-0909.pdf</a>
			Press tab here to add more rows

# Aylmer Water Operations – Operational Plan

## External Documents

Document Title	Document # (if applicable)	Date	Location, Person Responsible or File Path
<a href="#">Drinking Water Quality Management Standard</a>	DWQMS 2.0	2017	<a href="http://ontario.ca/page/drinking-water">ontario.ca/page/drinking-water</a>
Accreditation certificate			
Municipal Drinking Water Licence – Aylmer Distribution System	044-101		MECP issues (QMS Rep)
Drinking Water Works Permit – Aylmer Distribution System	044-201		MECP issues (QMS Rep)
Financial Plan	044-301		[to be updated online]
<a href="#">Safe Drinking Water Act, 2002</a>	SDWA, 2002	S.O. 2002, Ch. 32	<a href="http://ontario.ca/laws/statute/02s32">ontario.ca/laws/statute/02s32</a>
<a href="#">O. Reg. 128/04 Certification of Drinking Water System Operators and Water Quality Analysts</a>	O. Reg. 128/04	NA	<a href="http://ontario.ca/laws/statute/02s32">ontario.ca/laws/statute/02s32</a>
<a href="#">O. Reg. 169/03 Ontario Drinking Water Quality Standards</a>	O. Reg. 169/03	NA	<a href="http://ontario.ca/laws/statute/02s32">ontario.ca/laws/statute/02s32</a>
<a href="#">O. Reg. 170/03 Drinking Water Systems</a>	O. Reg. 170/03	NA	<a href="http://ontario.ca/laws/statute/02s32">ontario.ca/laws/statute/02s32</a>
<a href="#">O. Reg. 205/18 Municipal Residential Drinking Water Systems in Source Protection Areas</a>	O. Reg. 205/18	NA	<a href="http://ontario.ca/laws/statute/02s32">ontario.ca/laws/statute/02s32</a>
<a href="#">O. Reg. 248/03 Drinking Water Testing Services</a>	O. Reg. 248/03	NA	<a href="http://ontario.ca/laws/statute/02s32">ontario.ca/laws/statute/02s32</a>
Drinking Water System Profile Information		April 02 2020	Located on S Drive (QMS Rep)

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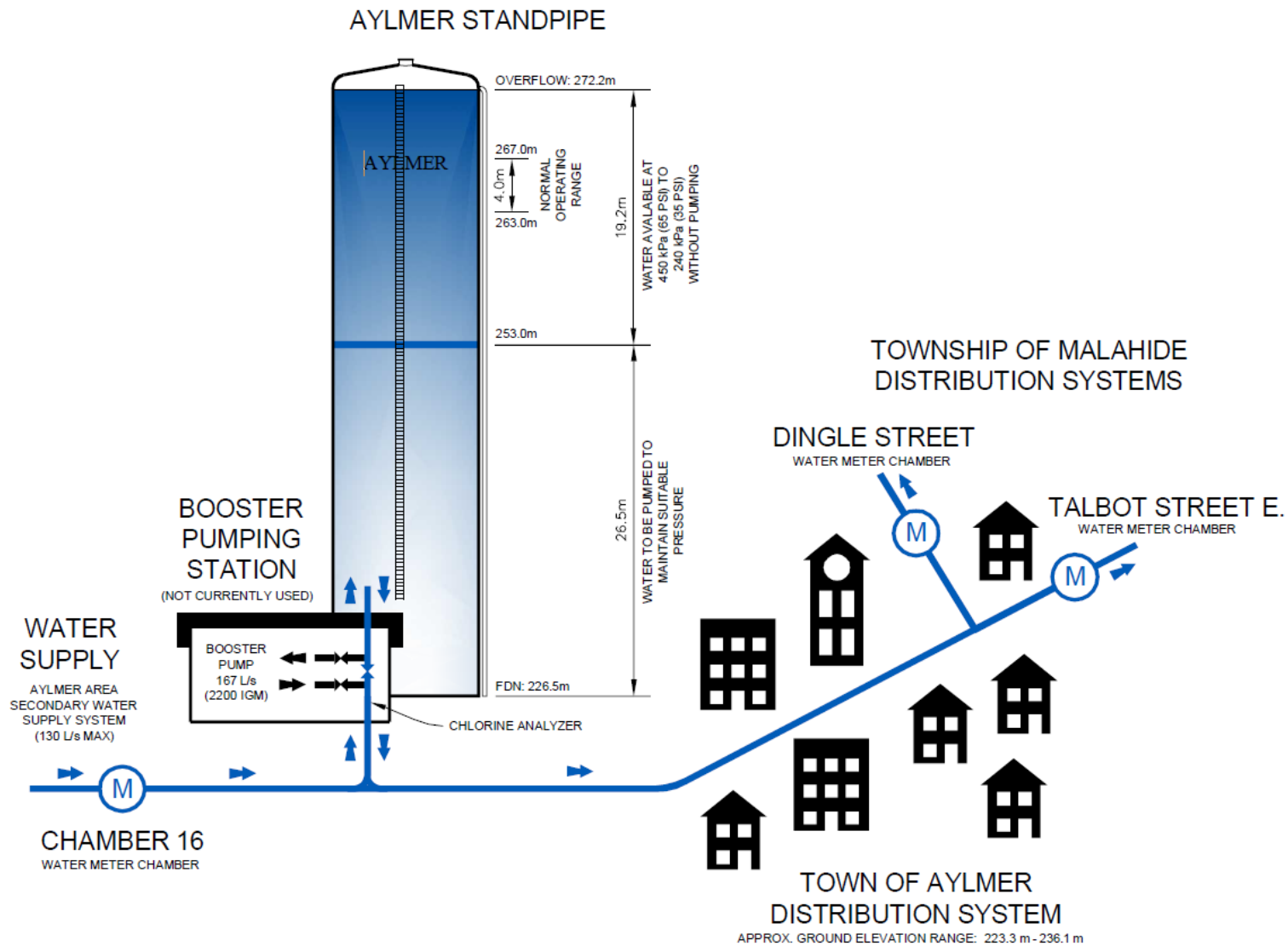
<i>Record Name</i>	<i>Filing Method</i>	<i>Location</i>	<i>Retention Period (years)</i>	<i>Maintained by</i>
Operational Plan – as audited	Electronic	S Drive	10 years	QMS Representative
Risk assessment outcomes	Electronic	S Drive	10 years	QMS Representative
Competence / training	Electronic	S Drive	E + 3 years (E = Operator's last day)	QMS Representative
Communications with interested parties	Electronic	S Drive	Tbd	Tbd
Financial records (purchasing, budgets, reports)	Hard copy and electronic	Accounts Payable	7 years	Finance dept.
Infrastructure records (as-built drawings, distribution system map, DWWP records – Forms 1, 2, 3)	Hard copy and electronic	S Drive / Public works Building - 32 Chipchase court	Permanent: as-builts 10 years: maps, forms	QMS Representative
Infrastructure maintenance (incl. calib. / verification)	Hard copy and electronic	Work Order System / Water Ops Logbook	15 years	QMS Representative
Infrastructure review meeting minutes	Electronic	S Drive	10 years	QMS Representative
Sampling, testing, monitoring (chains of cust., results)	Hard copy and electronic	S Drive / Public works Building - 32 Chipchase court	15 years	QMS Representative
Emergency preparedness training and testing	Hard copy and electronic	S Drive / Public works Building - 32 Chipchase court	10 years	QMS Representative
Audit reports (internal, external, Ministry inspections)	Hard copy and electronic	S Drive / Public works Building - 32 Chipchase court	10 years	QMS Representative
Management review minutes	Electronic	S Drive	10 years	QMS Representative

## Aylmer Water Operations – Operational Plan

<i>Record Name</i>	<i>Filing Method</i>	<i>Location</i>	<i>Retention Period (years)</i>	<i>Maintained by</i>
Annual & Summary reports	Electronic	S Drive	15 years	QMS Representative
Continual improvement (tracking sheet, completed forms)	Electronic	S Drive	10 years	QMS Representative Press tab to add row

# Aylmer Water Operations – Operational Plan

## Appendix “B” Aylmer Distribution System Schematic



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## Appendix “C” Essential supplies and services

Essential supply or service	Quality requirements	Contact: supplier or service provider	Means to ensure procurement
Laboratory	<p>Licensed and accredited as per O. Reg. 248/03 Drinking Water Testing Services.</p> <p>Proof of licence, accreditation and authorization to conduct tests requested verified with each new contract.</p>	<p><b>SGS Environmental Services</b> 657 Consortium Court, [REDACTED]</p> <p><b>SGS Environmental Services</b> [REDACTED]</p>	<p>Contract with qualified, licensed, accredited labs.</p> <p>Drinking water tests required are verified on the lab's listing of authorized tests.</p>
Primary Water Supply	<p>Certified operators</p> <p>Ensure any person authorized to carry-out work on or to operate any aspect of the drinking water system has been informed of the SDWA, applicable regulations, the MDWL, DWWP and ensure they comply.</p>	<p><b>Regional Water Supply</b> [REDACTED]</p> <p><b>Ontario Clean Water Agency</b> [REDACTED]</p>	<p>Sole suppliers</p> <p>Contracts / agreements</p>
Secondary Water Supply	<p>Certified operators</p> <p>Ensure any person authorized to carry-out work on or to operate any aspect of the drinking water system has been informed of the SDWA, applicable regulations, the MDWL, DWWP and ensure they comply.</p>	<p><b>Elgin Middlesex Pumping Station (EMPS)</b> Edgeware Road [REDACTED]</p> <p><b>Ontario Clean Water Agency</b> [REDACTED]</p>	<p>Contracts / agreements</p>

# Aylmer Water Operations – Operational Plan

Essential supply or service	Quality requirements	Contact: supplier or service provider		Means to ensure procurement
Distribution system parts and chemicals	<p>All chemicals and materials interacting with water must meet applicable AWWA and ANSI standards (NSF/60, NSF/61 and NSF 372).</p> <p>Safety data sheets required for each chemical product used.</p> <p>Proof of product conformity must be verified.</p>	<p><u>Sodium hypochlorite</u></p> <p><b>TSC</b> [REDACTED]</p> <p><b>Evans Utility Products</b> [REDACTED]</p>	<p><b>Parts</b> <b>Iconix Waterworks</b> [REDACTED]</p> <p><b>(Evans Utility...)</b></p> <p><b>Wolseley Canada</b> [REDACTED]</p>	<p>An inventory of essential supplies is kept in stock; the operator-in-charge orders as required.</p> <p>A minimum inventory of distribution system parts is always maintained; the operator-in-charge orders as required.</p>
Calibration products, equipment, and services	<p>Instrument calibrations and/or verification by qualified third-party.</p>	<p><b>Water meters:</b> Iconix Waterworks [REDACTED]</p> <p><b>Flowmetrix</b> [REDACTED]</p>	<p><b>Chlorine analyzers, colorimeters, other:</b> [REDACTED]</p> <p><b>Flowmetrix</b> [REDACTED]</p>	<p>Licensed technician.</p> <p>Tracking of verification / calibration dates (1:12 months).</p> <p>Calibration reports required.</p> <p>Unexpired verification reagents in stock.</p>
Other supplies, services and project-specific opportunities are specified through the Town's procurement process (through requests for tender, requests for proposals) and can change based on this purchasing process. Once vendors are confirmed, agreements are established and normal operating contact lists are maintained for ongoing operations and maintenance activities.				