

# The Corporation of the Town of Kingsville



## OPERATIONAL PLAN

For the

Kingsville Environmental Services

Revision 7, 23-Apr-2019

**DISCLAIMER STATEMENT**

This Operational Plan is designed for the exclusive use of The Corporation of the Town of Kingsville.

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 Corporation of the Town of Kingsville accept 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.

## **Index**

	<b>Title</b>
Element 1	Kingsville's Environmental Services' Quality Management System (QMS)
Element 2	Quality Management System (QMS) Policy
Element 3	Commitment & Endorsement of Kingsville's Environmental Services' QMS & Operational Plan
Element 4	Quality Management System Representative
Element 5	Document and Records Control
Element 6	Drinking-Water System
Element 7	Risk Assessment
Element 8	Risk Assessment Outcomes
Element 9	Organizational Structure, Roles, Responsibilities, and Authorities
Element 10	Competencies
Element 11	Personnel Coverage
Element 12	Communications
Element 13	Essential Supplies and Services
Element 14	Review and Provision of Infrastructure
Element 15	Infrastructure Maintenance and Rehabilitation
Element 16	Sampling, Testing, and Monitoring
Element 17	Measurement and Recording Equipment Calibration & Maintenance
Element 18	Emergency Management
Element 19	Internal Audits
Element 20	Management Review
Element 21	Continual Improvement

## **1. Kingsville Environmental Services Department Quality Management System (QMS)**

The Corporation of the Town of Kingsville, referred to hereafter as the Town of Kingsville, is the Owner of the Kingsville Water Distribution System. The Town of Kingsville is also the Operating Authority of the Kingsville Water Distribution System (WDS), which is operated by its water services department referred to in this Operational Plan as Kingsville Environmental Services Department.

This document is the drinking water Quality Management System (QMS) Operational Plan for the Kingsville Environmental Services Department.

The Town of Kingsville WDS's Quality Management System (QMS) is structured and documented with the purpose of:

1. Establishing policy and objectives with respect to the effective management and operation of the distribution system.
2. Understanding and controlling the risks associated with the distribution system's activities and processes.
3. Achieving continuous improvement of the QMS and the distribution system's performance.

## **2. Quality Management System (QMS) Policy**

The Kingsville Environmental Services Department, its management and entire staff are committed to the principles and objectives set out in our Quality Management System (QMS) Policy. The Town of Kingsville is committed to providing safe drinking water to its drinking water system customers.

This commitment shall be fulfilled by Kingsville Environmental Services Department with adherence to the following:

- 
- Operate and maintain the drinking water supply system in accordance with all applicable legislation and regulation
  - Ensure that all staff are well trained, competent to undertake the duties assigned them and certified appropriately
  - Provide its customers with safe drinking water
  - Maintain and continually improve the Quality Management System
- 

Our water system operational employees will be trained in the implementation of the QMS Policy. The QMS Policy will be given to Municipal Council and made available to the public on the municipal website and upon request.

### 3. **Commitment & Endorsement of the Kingsville Environmental Services Department QMS & Operational Plan**

This Operational Plan supports the overall goal of Kingsville Environmental Services Department and the Kingsville Water Distribution System to develop, implement and continuously improve its Quality Management System for the Kingsville Distribution System.

Top management of both the Kingsville Environmental Services Department and the Town of Kingsville has approved the QMS for the drinking water system as documented in this Operational Plan.

#### **Operating Authority Approval**

\_\_\_\_\_  
*Andrew Plancke, C. Tech (Env.)*  
*Director of Municipal Services*

\_\_\_\_\_  
Date

\_\_\_\_\_  
*Tim Del Greco, P.Eng*  
*Manager of Municipal Services*

\_\_\_\_\_  
Date

\_\_\_\_\_  
*Shaun Martinho, H.B.Sc., C.E.T.*  
*Manager of Public Works*

\_\_\_\_\_  
Date

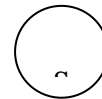
#### **Owner Endorsement & Approval**

\_\_\_\_\_  
CAO

\_\_\_\_\_  
Date

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Date



#### 4. Quality Management System Representative

All personnel have a role and associated responsibilities within the Kingsville Environmental Services Department's QMS.

The role of the QMS Representative(s) for the Kingsville Distribution System is shared between the Director of Municipal Services, the Manager of Municipal Services and the Manager of Public Works.

The Director of Municipal Services is responsible for:

- Establishing and maintaining processes and procedures required for the overall administration of the facility's QMS
- Reporting to the owner on QMS performance and identified improvements
- Monitoring the QMS performance and identifying opportunities for improvements
- Approving revisions to the SOP's

The Manager of Municipal Services is responsible for:

- Monitoring the QMS performance and identifying opportunities for improvements
- Maintaining Control of Master Operational Plan and Procedures Electronic File
- Distribution and updating of revisions to Operational Plan and Procedures
- Ensuring that current versions of the documents are in use

The Manager of Public Works is responsible for:

- Reviewing processes and standard operating procedures
- Operation of the drinking water system
- Monitoring the QMS performance and identifying opportunities for improvements
- Ensuring that personnel are aware of all applicable legislation and regulatory requirements that pertain to their operational duties
- Promoting awareness of the QMS to all water system personnel

In the absence of either QMS representative noted above, the alternate QMS representative assumes the combined roles and responsibilities.

#### 5. Document and Records Control

All documents and records required by this Quality Management System to demonstrate compliance with Kingsville Environmental Services' QMS Policy are maintained in accordance with Kingsville Environmental Services procedures in the **Procedure 5:01 in Appendix A**.

All documents and records required by this Quality Management System are:

- i. Kept current, legible and readily identifiable
- ii. Retrievable
- iii. Appropriately stored, protected, retained and disposed of

## **6. Drinking Water System**

### **6.1 General**

The Kingsville Environmental Services supplies water to residents, institutions and businesses in the municipality. The population served is approximately 21,800.

### **6.2 System Overview**

The Kingsville Water Distribution System (WDS) is a stand-alone water distribution system which is a single operational system.

The Kingsville WDS is connected to several other water systems. It receives all of its water from a water treatment plant (WTP) located in the municipality and owned by the Union Water Supply System (UWSS). There are connections to the following municipal water distribution systems in addition to, various private water systems:

- Municipality of Leamington Union Water Distribution System
- Town of Essex Union Water Distribution System
- Town of Essex Harrow-Colchester South Water Distribution System
- Town of Lakeshore Union Water Distribution System

### **6.3 Water Source**

The Kingsville WDS obtains all of its drinking water from the UWSS.

The UWSS is:

- 1) owned by four municipalities being Essex, Kingsville, Lakeshore and Leamington
- 2) managed by a Joint Board of Management
- 3) operated by the Ontario Clean Water Agency.

The raw water is obtained from Lake Erie and is treated by a conventional surface-water treatment plant.

### **6.4 Critical Control Processes**

- |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6.4.1 Upstream   | The UWSS controls the treatment of the raw water and the secondary disinfection of the treated water. It is responsible for operating the treatment plant to ensure that safe drinking water is produced. The UWSS monitors and controls the combined chlorine residual leaving the WTP to ensure that it is high enough to result in a proper residual in the most remote part of the distribution system. The UWSS controls the pressure in the system by the operation of the WTP pumps and the water towers. The UWSS monitors and controls the water level in the Leamington Water Tower and the Kingsville Water Tower to ensure a proper pressure in the Kingsville WDS. |
| 6.4.2 Downstream | The Kingsville WDS operates a backflow prevention program through its Building Department to ensure that backflow preventors are installed, maintained and operated at all business premises connected to the water distribution system where a threat from backflow exists.                                                                                                                                                                                                                                                                                                                                                                                                    |

### 6.5 Connections to Other Systems

There are four (4) interconnections between the Kingsville WDS and other municipal water systems. The Kingsville WDS is connected to the UWSS at a number of points. The Kingsville WDS receives water from the UWSS at these points:

1. The Kingsville WDS is connected to the Leamington (Union) WDS at a number of points. With one exception these connection points are at valves which are normally closed. The valves are routinely maintained however will only remain open in an emergency.
2. The Kingsville WDS is connected to the Essex (Union) WDS. The connection points are at valves which are closed. The valves are routinely maintained however will only remain open in an emergency.
3. The Kingsville WDS is connected to the Town of Essex Harrow-Colchester South WDS. The two connection points are at valves which are closed. The valves are routinely maintained however will only remain open in an emergency.
4. The Kingsville WDS supplies water to the Lakeshore (Union) WDS. The valves are routinely maintained and remain open.

Current interconnections are shown on the system map located in the geographic information system.

### 6.6 Water Distribution System Components

The Kingsville WDS is comprised of approximately 365 kilometers of watermains from 100mm (4inch) to 300mm (12inch) in diameter. There are approximately 1100 fire hydrants in the system. There are approximately 7250 residential service and commercial service connections.

### 6.7 Related Documents

Water System Distribution Map – located in Environmental Shop

### 6.8 Operational Challenges

Currently, there are no significant operational challenges in the daily maintenance of the system.

Future challenges that are being reviewed consist of the following:

- the large demand for water by the growing greenhouse industry
- pressures throughout the system are adequate for drinking water however are insufficient for fire protection
- dead end waterlines where residential consumption exists have automatic flushers and are considered for annual looping initiatives.



Subject System Description Form			
Municipal Residential Drinking-Water System			
Owner of Municipal Residential Drinking-Water System: <sup>1</sup>		The Corporation of the Town of Kingsville	
Name of Municipal Residential Drinking-Water System: <sup>2</sup>		Kingsville Water Distribution System	
Subject Systems			
	Name of Operational Subsystems (if applicable) <sup>3</sup>	Name of Operating Authority <sup>5</sup>	DWS Number(s) <sup>6</sup>
<input type="checkbox"/> Check here if the Municipal Residential Drinking-Water System is operated by one operating authority. Enter the name of the operating authority in adjacent column <sup>4</sup>		Kingsville Environmental Services	220003403
Operational Subsystem 1:			
Operational Subsystem 2:			
Operational Subsystem 3:			
Operational Subsystem 4:			
Add attachments if there are additional 'Operational Subsystems'			
Contact Information <sup>7</sup>			
Name	Title	Phone No(s).	Email Address
Andrew Plancke	Director of Municipal Services	519-733-2305 ext 304	aplancke@kingsville.ca
Tim Del Greco	Manager of Municipal Services	519-733-2305 ext 230	tdelgreco@kingsville.ca
Shaun Martinho	Manager of Public Works	519-733-2305 ext 226	smartinho@kingsville.ca

## 7. Risk Assessment

Refer to **Appendix A, Procedure 7/8:01** Risk Assessment and Risk Assessment Outcomes.

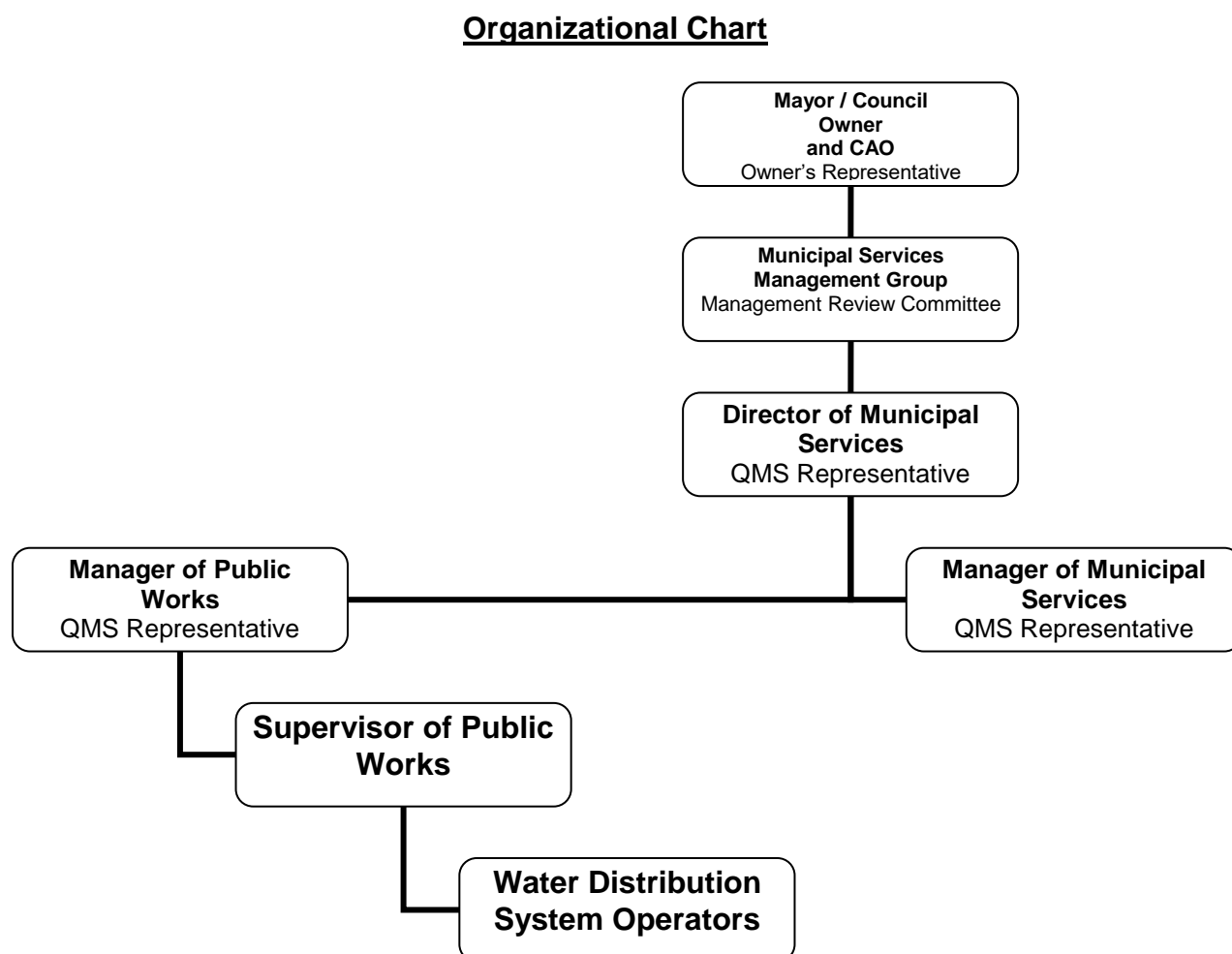
## 8. Risk Assessment Outcomes

Refer to **Appendix A, Procedure 7/8:01**, for summary tables of Risk Assessment Outcomes.

## 9. Organizational Structure, Roles, Responsibilities, and Authorities

The Director of Municipal Services (QMS Representative) will keep the organizational structure, roles, responsibilities, and authorities current and will communicate this information to the Operating Authority's personnel and the Owner. The Director of Municipal Services (QMS Representative) is the Top Management for Kingsville Environmental Services. The Owner of this system is The Corporation of the Town of Kingsville.

The following flow chart represents the Organizational Structure for The Corporation of the Town of Kingsville.



The following table lists the Position Titles, the responsibilities of each position, and their respective authorities.

### **Roles, Responsibilities, and Authorities Table**

<b>TITLE</b>	<b>RESPONSIBILITIES</b>	<b>AUTHORITIES</b>
<i>Mayor, Council and CAO, through the Director of Municipal Services</i>	<ul style="list-style-type: none"> <li>▪ Complete oversight of the entire distribution system and the QMS</li> <li>▪ Ultimate responsibility for the provision of safe drinking water</li> <li>▪ Ensure compliance with applicable legislation and regulations</li> </ul>	<ul style="list-style-type: none"> <li>▪ Financial &amp; administrative authority related to the distribution of safe drinking water</li> </ul>
<i>Director of Municipal Services</i>	<ul style="list-style-type: none"> <li>▪ Complete oversight and operation of the entire distribution system</li> <li>▪ Responsibilities of QMS representative as outlined in Element 4</li> <li>▪ Provide and/or obtain resources for the QMS and necessary infrastructure and resources to operate and maintain the drinking water system safely and efficiently</li> <li>▪ Ensure the system is operated in accordance with applicable legislation and regulations</li> <li>▪ Responsible for leading Management Review</li> <li>▪ Communication with Mayor &amp; Council about the QMS and the water distribution system</li> <li>▪ Communication/liaison with the Manager of Municipal Services and the Manager of Public Works</li> <li>▪ Reviews Risk Assessment annually</li> <li>▪ Keeps Roles and Responsibilities Table current</li> <li>▪ Determines schedule for internal audit and management review and develops action plans from audit</li> <li>▪ Recommendation of system improvements</li> <li>▪ Develop procedures and processes for assuring water quality</li> <li>▪ Emergency response planning &amp; training</li> <li>▪ Overall responsible Operator for both water distribution and wastewater collection</li> <li>▪ Ensures that all municipal studies are kept up to date</li> <li>▪ Other duties as assigned</li> </ul>	<ul style="list-style-type: none"> <li>▪ Financial, administrative and technical authority related to the distribution of safe drinking water</li> <li>▪ Make changes to the QMS</li> <li>▪ Respond to public inquiries and complaints</li> <li>▪ Is top management for Kingsville Environmental Services</li> </ul>

## The Corporation of the Town of Kingsville

TITLE	RESPONSIBILITIES	AUTHORITIES
<i>Manager of Municipal Services</i>	<ul style="list-style-type: none"> <li>▪ Provide project management coordination and contract management of all municipal work projects using municipal computer software</li> <li>▪ Attend construction meeting when necessary</li> <li>▪ Provide coordination of all capital projects by controlling project work scheduling, financing and effectively communicating project data</li> <li>▪ Ensures requirements are met for storage, protection, retrieval, retention and disposition of documents</li> <li>▪ Review Risk Assessment with the Director on an annual basis</li> <li>▪ Coordination and participation in the QMS Management Review</li> <li>▪ Control of Operational Plan and Procedures Revisions Electronic Master File</li> <li>▪ Other duties as assigned</li> </ul>	<ul style="list-style-type: none"> <li>▪ Attend Council meetings as required</li> <li>▪ Make changes to the QMS</li> <li>▪ Recommends rehabilitation &amp; renewal activities for annual budget</li> <li>▪ Project Management</li> </ul>
<i>Manager of Public Works</i>	<ul style="list-style-type: none"> <li>▪ Preparation of budget and planning materials</li> <li>▪ Works with supervisor on annual assessments of operator personnel performance</li> <li>▪ Back-up Overall Responsible Operator for both water distribution and wastewater collection</li> <li>▪ Administers and records all requests for vacation, time off, training schedules and work schedules of personnel in the Municipal Services Department</li> <li>▪ Develop and implement maintenance programs and ensure compliance with the SDWA and DWQMS</li> </ul>	<ul style="list-style-type: none"> <li>▪ Financial, administrative and technical authority related to the distribution of safe drinking water</li> <li>▪ Staffing within the guidelines of the municipality and its collective agreement</li> <li>▪ Oversee adverse water quality incidents and responses</li> <li>▪ Activity/program scheduling within Kingsville Environmental Services</li> <li>▪ Identify and oversee staff training</li> <li>▪ Attend council meetings as required</li> <li>▪ Respond to public inquiries and complaints</li> <li>▪ Alternate contact in the absence of the Director of Municipal Services for Environmental Services</li> </ul>
<i>Supervisor of Public Works</i>	<ul style="list-style-type: none"> <li>▪ Schedule and oversee the day-to-day activities relating to the water distribution system</li> <li>▪ Supervision and completion of all work orders received, dispatch to appropriate departments, provide follow-up (as required) and provide on-site supervision of municipal employees until work order has been completed</li> <li>▪ Other duties as assigned</li> </ul>	<ul style="list-style-type: none"> <li>▪ Direct operators in day-to-day operation and maintenance of the water distribution system</li> <li>▪ Orders day-to-day supplies and equipment as needed</li> <li>▪ Ensure that all work is performed in compliance with the OHSA</li> </ul>
<i>Water Distribution Operators</i>	<ul style="list-style-type: none"> <li>▪ Regular maintenance of the water distribution system</li> <li>▪ Report any incidents of non-compliance</li> <li>▪ Respond to repair directed from Director/Manager/Supervisor</li> </ul>	<ul style="list-style-type: none"> <li>▪ Maintenance of the water distribution system</li> <li>▪ Respond to public complaints as relayed from the Director or Supervisor</li> </ul>
<i>Municipal Services Management Group</i>	<ul style="list-style-type: none"> <li>▪ Management Review Committee</li> </ul>	

## 10. Competencies

The following table illustrates the competencies required by personnel whose duties directly affect drinking water quality.

**COMPETENCY REQUIREMENTS TABLE**

<b>Role</b>	<b>Required Competencies</b>
<i>Director of Municipal Services</i>	See Job Description Appropriate Certification Required
<i>Manager of Municipal Services</i>	See Job Description Appropriate Certification Required
<i>Manager of Public Works</i>	See Job Description Appropriate Certification Required
<i>Supervisor of Public Works</i>	See Job Description Appropriate Certification Required
<i>Water Distribution Operators</i>	See Job Description Appropriate Certification Required

The competency requirements listed in the Competency Requirements Table are addressed by various means including:

- All employees listed have provided evidence of certification and other “required” competencies. All MOE required certificates or copies thereof are posted at the Kingsville Environmental Services Building Shop.
- Changes to the Distribution System and/or to the QMS are communicated, as needed, to all Kingsville Environmental Services Department staff by the Director of Municipal Services.
- Kingsville Environmental Services staff is to be provided training opportunities throughout the year. Training will be scheduled as requested and as required to meet mandated licensing and certification requirements.
- All records of training are maintained at the Kingsville Environmental Services Department office as proof that the required training has been successfully completed. The Director of Municipal Services is responsible for monitoring the completion of all identified training.
- Annual performance reviews are completed to evaluate individual competencies and make recommendations for improvements and goals for professional development.

## 11. Personnel Coverage

Refer to **Appendix A, Procedure 11:01**, for Personnel Coverage

## 12. Communications

Refer to **Appendix A, Procedure 12:01** Communications.

### **13. Essential Supplies and Services**

Refer to **Appendix A, Procedure 13:01** Essential Supplies and Services.

### **14. Review and Provision of Infrastructure**

Refer to **Appendix A, Procedure 14:01** Review and Provision of Infrastructure.

### **15. Infrastructure Maintenance and Rehabilitation**

This Element summarizes the maintenance, rehabilitation and renewal programs that are in place for the infrastructure of the Kingsville WDS.

#### **15.1 Planned Infrastructure Maintenance**

The Public Works Manager for Kingsville in consultation with distribution staff recommends and plans maintenance activities for the annual budget.

The Director of Municipal Services of Kingsville in consultation with the Public Works Manager authorizes planned maintenance activities.

Planned maintenance is documented through time sheets, maintenance records & work orders.

Planned maintenance is communicated through routine meetings with staff.

Equipment Operation and Maintenance (O&M) manuals are accessible to staff at the locations specified in QMS Procedure 5:01 Document and Records Control.

#### **15.2 Unplanned Infrastructure Maintenance**

The Public Works Manager for Kingsville in consultation with staff authorizes unplanned maintenance.

Unplanned maintenance is responded to on an as needed or emergency basis.

Unplanned maintenance is documented through the appropriate work orders and maintenance records.

Unplanned maintenance is reviewed annually for trends. This is achieved through a review of Kingsville WDS annual statistics.

### **15.3 Infrastructure Rehabilitation and Renewal**

The Director of Municipal Services for Kingsville in consultation with distribution staff recommends rehabilitation and renewal activities for the annual budget.

The Director of Municipal Services for Kingsville plans rehabilitation and renewal activities based on the approved annual capital budget.

The Director of Municipal Services for Kingsville WDS in consultation with the management review team authorizes any planned rehabilitation and renewal activities.

Planning with other departments, projected growths, and the results of unplanned maintenance trends, are considered when planning rehabilitation activities.

The infrastructure needs and approved plans are communicated through management and staff meetings.

### **16. Sampling, Testing, and Monitoring**

Refer to **Appendix A, Procedure 16:01** Sampling, Testing, and Monitoring.

### **17. Measurement and Recording Equipment Calibration & Maintenance**

Refer to **Appendix A, Procedure 17:01** Measurement and Recording Equipment Calibration & Maintenance.

### **18. Emergency Management**

Refer to **Appendix A, Procedure 18:01** Emergency Management.

### **19. Internal Audits**

Refer to **Appendix A, Procedure 19:01** Internal Audits.

### **20. Management Review**

Refer to **Appendix K, Procedure 20:01** Management Review.

### **21. Continual Improvement**

Kingsville Environmental Services will strive to continually improve the effectiveness of its Drinking Water Quality Management System through the use of corrective actions from annual audits, staff suggestions, and management reviews.




## **Appendix A**



# **Appendix A**

## **Index**

Procedure 5:01	Documents and Records Control
Procedure 7/8:01	Risk Assessment & Risk Assessment Outcomes
Procedure 11:01	Personnel Coverage
Procedure 12:01	Communications
Procedure 13:01	Essential Supplies and Services
Procedure 14:01	Review and Provision of Infrastructure
Procedure 16:01	Sampling, Testing, and Monitoring
Procedure 17:01	Measurement and Recording Equipment Calibration & Maintenance
Procedure 18:01	Emergency Management
Procedure 19:01	Internal Audits
Procedure 20:01	Management Review

	<b>Kingsville Environmental Services</b> <b>Procedure 5:01</b> <b>Documents and Records Control</b>	Element: # 5:01 Issued: 26-Jan-09 Rev.#: 3 Pages: 1 of 5
<b>Reviewed by:</b> Corrine Gabriele Manager of Municipal Services	<b>Approved by:</b> Andrew Plancke Director of Municipal Services	

## 1.0 Purpose

The purpose of this procedure is to describe the methods for identification, storage, protection, retrieval, review, updating, retention time and disposition of Documents and Records.

## 2.0 Scope

This procedure is applicable to Kingsville Environmental Services employees who manage or perform work related to the Kingsville Water Distribution System operations. This procedure covers all QMS Documents and Records identified in Table 1.

## 3.0 Responsibilities

3.1. All employees of Kingsville Environmental Services are:

- Responsible for complying with this procedure
- Responsible for requesting changes to existing QMS Documents

3.2. QMS Representative(s) is(are):

- Responsible for activities related to maintaining control of and updating documents
- Responsible for ensuring that the requirements of this procedure are met for storage, protection, retrieval, retention time and disposition of documents and records
- To ensure independent review, the QMS representative reviewing a document will be a separate individual than the QMS representative approving that document.
- To ensure updated documents are current and employees are informed of all revisions.

## 4.0 Definitions

**Document** – includes a written page, sound recording, video tape, film, photograph, chart, graph, map, plan, survey, book of account and any other information recorded or stored by means of any device

**Record** – a document stating results achieved or providing proof of activities performed

**QMS Document** – any document required by the QMS as identified in this procedure

**QMS Record** – any record required by the QMS as identified in this procedure

**Controlled** – the method of tracking changes, revisions and implementation of the document

**Retention Period** – length of time that a document or record must be kept; see Table 2

## **5.0 Procedure**

### **5.1 Documents and Records**

- Documents are either internal QMS documents or external QMS documents.
- Documents and Records required by the QMS are listed in Table 1.

### **5.2 Currency & Legibility**

- QMS records are filed at the Kingsville municipal office, Environmental Services Department.
- QMS records are stored in such a manner as to prevent deterioration.
- QMS records in retention are filed in the vault at the Kingsville municipal office
- Records older than the age noted in Table 2 are archived, on Laserfiche.
- Documents are edited in a timely manner, as changes occur, by the QMS representative responsible.
- Manager of Municipal Services controls the master electronic copy documents and modifications to them.
- Director of Municipal Services reviews and approves any and all updates to the QMS documents prior to distribution and use.
- Manager of Municipal Services distributes hard copies of documents as updated for staff reference and review.
- All QMS documents are reviewed by the QMS representative on an annual basis, to ensure that the information is still correct and current.
- All manual documents and records shall be clearly visible and legible. Pencil or any other erasable marker shall not be used to record information or data.

### **5.3 Identification**

- External Documents are identified by date stamping upon receipt and filing the document. Table 1 is then updated to reflect the addition of the new document.
- Internal Documents and Records are prepared in a consistent format, similar to this procedure in format, and are all numbered and dated to assist in managing, locating and retrieving them.

### **5.4 Storage & Retrieval**

- The QMS Document and Record Control Centre is the office of Kingsville Environmental Services Department, and control is the responsibility of the assigned QMS Representative(s)
- Originals of all active paper records are stored in the Town of Kingsville, Environmental Services Department
- Copies of the Operational Plan and Procedures are maintained in the Town of Kingsville Environmental Services Department and Environmental Shop by the designated QMS representative

- Originals of all electronic records are stored in The Town of Kingsville's main server.
- All internal QMS documents are electronically controlled, with only the designated QMS representatives having electronic permission to modify them.
- Archived documents and records are stored in The Town of Kingsville, municipal office vault.

### 5.5 Protection

- Active paper documents and records are stored in file cabinets, and are thus protected from damage, deterioration and loss.
- Master Operational Plan and Procedures is a controlled electronic document maintained by a designated QMS representative.
- Electronic records are stored in a "read-only" manner on a file server remote from Kingsville Environmental Services Department Offices, and are backed up on a daily basis.
- Archived documents and records are stored on Town of Kingsville's Laserfiche program.

### 5.6 Retention

- Records will be maintained for the length of time indicated in Table 2 below

### 5.7 Disposal

- Disposal of obsolete documents and records is the responsibility of the assigned QMS Representative
- Records older than the age noted in Table 2 are archived or destroyed as per the Town's Record Retention Policy.

## 6.0 Related Documents & Records

A list of associated forms, procedures, work instructions, documents, and other records, is attached to this Procedure as Table 1.

## 7.0 Revision History

Date	Revision #	Reason for Revision
26-Jan-09	0	Procedure issued
28-Mar-11	1	Updates following Internal Audit
4-Apr-11	2	Updates following CGSB Systems Audit Report – 2010
2-Dec-13	3	Updates following SAI Global Audit 2013

## 8.0 Review History

Date	Reason for Revision
3-Jun-14	12 month review
2-Dec-13	36 month reassessment


**Table 1:** Designated location for documents and records required by the Operating Authority's QMS

Type of Document	Designated Document Control Location (HC = Hardcopy)	Document Review Cycle
<b>Internal QMS Documents</b>		
Standard Operating Procedures – related to QMS	Town of Kingsville –Environmental Services Department	Annually
Emergency/Essential Supplies and Services List	Town of Kingsville –Environmental Services Department	Annually
Master Operational Plan and Procedures	Electronically – Protected File	Annually
Operational Plan and Procedures	Town of Kingsville Environmental Services Department and Environmental Shop	Annually
Annual Operational Budget and Capital Budget	Town of Kingsville – Director of Municipal Services Office	Annually
System Map	Electronically – GIS layers	Annually
<b>External QMS Documents – External to Kingsville Environmental Services</b>		
Applicable Acts and Regulations	Electronically	On going
Maintenance manuals, equipment manuals	Town of Kingsville –Environmental Services Department	On going
AWWA and other Standards	Town of Kingsville –Municipal Services Department	On going
Municipal By-Laws	Electronically	On going
Collective Agreement	Town of Kingsville –Municipal Services Department and Environmental Services Building (HC)	Upon Execution of Agreement
Town of Kingsville – Policy Manual	Town of Kingsville –Municipal Services Department and Environmental Services Building (HC)	On going
Town of Kingsville Emergency Response Plan	Town of Kingsville –Municipal Services Department and Environmental Services Building (HC)	On going
<b>QMS Records</b>		
Completed Work Orders/City Works	Town of Kingsville Municipal Services Department	Daily
Completed Chlorine Residuals	Town of Kingsville – Municipal Services Department	Daily
Completed Hydrant Inspection Forms	Town of Kingsville – Municipal Services Department	Daily
Communications related to QMS, Internal and external	Electronically	Daily
Calibrations Certificates	Town of Kingsville – Municipal Services Department	Annually
Completed Management Review Documents	Town of Kingsville – Municipal Services Department	Annually
Annual Operational Budget and Capital Budget	Electronically	Annually
Training records	Electronically	Daily
Flushing Log	Town of Kingsville – Environmental Services Department	Daily
External/Internal Audit Reports,	Town of Kingsville – Municipal Services Department	Annually

Type of Document	Designated Document Control Location (HC = Hardcopy)	Document Review Cycle
Action Plans and Checklists		
Vacation Schedule	Town of Kingsville – Municipal Services Department	Annually
Daily Time Sheets	Town of Kingsville – Municipal Services Department	Annually
Monthly Overtime Summary	Town of Kingsville – Municipal Services Department and Environmental Services Building (HC)	Biweekly
<b>QMS Forms</b>		
Hydrant Inspection Form	Town of Kingsville – Environmental Services Building	Annually
Meter Change Out / Repair Sheets	Town of Kingsville – Environmental Services Building	Annually
Vacation Request Form	Town of Kingsville – Environmental Services Building	Annually
Daily Time Sheet	Town of Kingsville – Environmental Services Building	Annually

**Table 2: Record Retention**

RECORD	RETENTION TIME / LOCATION	LEGISLATION
Completed Work Orders/City Works	7 years / Vault	By-Law 93-2003
Completed Chlorine Residuals	7 years / Vault	By-Law 93-2003
Completed Hydrant Inspection Documents	7 years / Vault	By-Law 93-2003
Communications related to QMS, Internal and External	7 years / Vault	By-Law 93-2003
Calibrations Certificates	7 years / Vault	By-Law 93-2003
Completed Management Review Documents	7 years / Vault	By-Law 93-2003
Annual Operational Budget and Capital Budget	7 years / Vault	By-Law 93-2003
Training Records	7 years / Vault	By-Law 93-2003
Flushing Log	7 years / Vault	By-Law 93-2003
External/Internal Audit Reports, Action Plans and Checklists	7 years / Vault	By-Law 93-2003
Vacation Schedule	7 years / Vault	By-Law 93-2003
Completed Daily Time Sheets	7 years / Vault	By-Law 93-2003
Monthly Overtime Summaries	7 years / Vault	By-Law 93-2003

	<b>Kingsville Environmental Services</b> <b>Procedure 7/8:01</b> <b>Risk Assessment &amp; Outcomes</b>	Element: # 7/8:01 Issued: 26-Jan-09 Rev.#: 2 Pages: 1 of 6
<b>Reviewed by:</b> Corrine Gabriele Manager of Municipal Services	<b>Approved by:</b> Andrew Plancke Director of Municipal Services	

## 1.0 Purpose

To define the process for conducting a drinking water risk assessment and for documenting and reviewing the results.

## 2.0 Scope

Applies to the Kingsville Environmental Services drinking water system and is limited to the assessment of potential drinking water health hazards. The approach to addressing other potential hazards is set out in QMS Procedure #18:01 Emergency Management.

## 3.0 Responsibilities

- All employees of Kingsville WDS
- QMS Representative(s)

## 4.0 Definitions

**Critical Control Point (CCP)** – an essential step or point in the subject system at which control can be applied by the operating authority to prevent or eliminate a drinking-water health hazard or to reduce it to an acceptable level

**Hazardous Event** – an incident or situation that can lead to the presence of a hazard

**Hazard** – a source of danger or a property that may cause drinking water to be unsafe for human consumption; may be biological, chemical, physical or radiological in nature

**Control Measure** - includes any processes, physical steps or other contingencies that have been put in place to prevent or reduce a hazard before it occurs

**Likelihood** – the probability of a hazard or hazardous event occurring

**Consequence** – the potential impact to public health and/or operation of the drinking water system if a hazard/hazardous event is not controlled

**Threshold Number** – numerical value assigned by the assessment team to a high risk event. Events ranked at or above this limit require further investigation to determine whether they are critical control points.

## 5.0 Procedure

- 5.1 The QMS Representative(s) will conduct the risk assessment.
- 5.2 Using the system's map, identify hazardous events and associated hazards (possible outcomes) that could impact the system's ability to deliver safe drinking water in Table 1 for each activity/process step.
- 5.3 For each of the hazardous events, specify control measures currently in place at the facility that eliminate the hazard or prevent it from becoming a threat to public health.

Note: Some hazards/hazardous events may have step-by-step emergency plans associated with them. These emergency plans are further described in QMS Procedure #18:01 Emergency Management.

- 5.4 Taking into consideration existing control measures (including the reliability and redundancy of equipment), assign each hazardous event a value for the likelihood and a value for the consequence of that event occurring based on the following criteria:

Value	Likelihood of Hazardous Event Occurring
1	<b>Little or no potential</b> (rare, low risk, has not occurred) – more than every 25 years
2	<b>Rare</b> (infrequent, not likely, rare) - 5 to 25 years
3	<b>Infrequent</b> (moderate likely, occasional, possible) – 1 to 5 years
4	<b>Frequent</b> (often, highly likely, routinely, occasional) - monthly to a year
5	<b>Routine</b> (immediate, extremely likely, frequent) – daily to weekly

Value	Consequence of Hazardous Event Occurring
1	<b>Insignificant</b> – Little or no disruption to normal operations, no impact on public health
2	<b>Minor</b> – Significant modification to normal operations but manageable, no impact on public health
3	<b>Moderate</b> – Potentially reportable, corrective action required, potential public health impact, disruption to operations is manageable
4	<b>Major</b> – Reportable, system significantly compromised and abnormal operations if at all, high level of monitoring and corrective action required, threat to public health
5	<b>Catastrophic</b> – Complete failure of system, water unsuitable for consumption

Add the likelihood and consequence values to determine the risk value (ranking) of each hazardous event and record all values in Table 1. Hazardous events with a ranking of 9 or greater are considered high risk.

- 5.5 Review the hazardous events and rankings documented in Table 1 and identify your Critical Control Points. Critical Control Points must meet all the following criteria:
- ✓ The hazardous event has a ranking of 9 or greater
  - ✓ The hazardous event can be prevented, eliminated or reduced
  - ✓ The hazardous event can be monitored
  - ✓ Control limits can be assigned to a hazardous event, and
  - ✓ Control of a hazardous event is essential to ensure the safety of the drinking-water.
- 5.6 List identified CCPs in Table 2. Document critical control limits (e.g. chlorine residuals) for each CCP. List the procedures that are developed to:
- Monitor the critical control limits
  - Respond to, report and record deviations from the critical control limits.
- 5.7 The risk assessment will be verified and updated annually by QMS Representative(s). The updated risk assessment will be reviewed annually as part of the Management Review process.



- 5.8 The QMS Representative(s) will review this Procedure on an annual basis and revise as necessary. This Procedure and revisions will be reviewed annually as part of the Management Review process.

**6.0 Related Documents**

Standard Operating Procedures – related to QMS  
Municipal Emergency Response Plan  
System Map  
AWWA/Industry Standards  
Applicable Municipal Bylaws  
Contract Agreement with UWSS

**7.0 Revision History**

Date	Revision #	Reason for Revision
26-Jan-09	0	Procedure issued
4-Apr-11	1	Updates following CGSB Systems Audit Report - 2010
2-Dec-13	2	Updates following SAI Global Audit 2013

**8.0 Review History**

Date	Reason for Revision
3-Jun-14	12 month review
2-Dec-13	36 month reassessment



# Kingsville Environmental Services Procedure 7/8:01 – Tables 1 & 2 Risk Assessment & Outcomes

Element: # 7/8:01  
Issued: 26-Jan-09  
Rev.#: 1  
Pages: 4 of 6

4

**Reviewed by:** Corrine Gabriele  
Manager of Municipal Services

**Approved by:** Andrew Plancke  
Director of Municipal Services

**Table 1: Risk Assessment Table**

Activity/ Process Step	Description of Hazardous Event	Possible Outcome (Hazards)	Existing Control Measures	Likelihood	Consequence	Risk Value	CCP?
Reservoirs, standpipes	Chemical/Biological contamination at tower/reservoir (vandalism/terrorism)	Potential for unsafe drinking water	Security – locked doors, fencing Under the responsibility of the UWSS	1	5	5	<input type="checkbox"/> Yes CCP <input checked="" type="checkbox"/> No
	Structural/mechanical failure at reservoir/standpipe causing low pressure	Potential for unsafe drinking water	Inspections conducted as per regulations, routine checks by operations Under the responsibility of the UWSS	1	2	2	<input type="checkbox"/> Yes CCP <input checked="" type="checkbox"/> No Control by UWSS
Distribution	Low Pressure	Potential for unsafe drinking water	Log & monitor through customer complaints to check pressure SOP#5 – Water Service - Low Pressure / Service Leaks	2	4	8	<input type="checkbox"/> Yes CCP <input checked="" type="checkbox"/> No
	Pipeline Break	Potential for unsafe drinking water	SOP#10, SOP#11, SOP#12 - Watermain Break Emergency Plan Competent Staff AWWA Standards	4	3	12	<input type="checkbox"/> Yes CCP <input checked="" type="checkbox"/> No No Control limits Adequate control measures in place
	Adverse Water Result in Distribution  Adverse as defined in O.Reg. 170/03	Potential for unsafe drinking water	Procedure 16:01 for Sampling, Testing and Monitoring (including Adverse Water (AWQI)) SOP#1 and SOP#6 for Flushing	4	3	12	<input type="checkbox"/> Yes CCP <input checked="" type="checkbox"/> No No Control limits Adequate control measures in place

Activity/ Process Step	Description of Hazardous Event	Possible Outcome (Hazards)	Existing Control Measures	Likelihood	Consequence	Risk Value	CCP?
	Loss of Supply	Low pressure leading to potential contamination	Town of Kingsville Emergency Response Plan SOP#13 Emergency Interconnect	1	5	5	<input type="checkbox"/> Yes CCP <input checked="" type="checkbox"/> No
	Loss of Supply	No Potable Water	Town of Kingsville Emergency Response Plan SOP#13 Emergency Interconnect	1	5	5	<input type="checkbox"/> Yes CCP <input checked="" type="checkbox"/> No
	Aging Infrastructure	Potential for unsafe drinking water, reduced flows, pipeline breaks	Infrastructure rehabilitation and Renewal (Annual Operational and Capital Budgets)	5	2	10	<input type="checkbox"/> Yes CCP <input checked="" type="checkbox"/> No No Control limits Adequate control measures in place
	Failure of back flow preventors	Potential for unsafe drinking water	Back Flow Prevention By Law requiring Annual inspections	3	3	9	<input type="checkbox"/> Yes CCP <input checked="" type="checkbox"/> No Municipality oversees back flow prevention program under Provincial Building Code
	Failure to maintain target secondary disinfection	Potential for unsafe drinking water	SOP#1 and SOP#6 for Flushing Procedure 16:01 for Sampling and Monitoring Refer to UWSS	3	3	9	<input checked="" type="checkbox"/> Yes CCP <input type="checkbox"/> No

### Revision History

Date	Revision #	Reason for Revision
26-Jan-09	0	Initial risk assessment conducted
28-Mar-11	1	Updates following Internal Audit
2-Dec-13	2	Updates following SAI Global Audit 2013

**Review History**

Date	Reason for Revision
3-Jun-14	12 month review
2-Dec-13	36 month reassessment

**Table 2: Identified Critical Control Points (CCPs)**


CCP	Critical Control Limits	Monitoring Procedures	Response, Reporting and Recording Procedures
Failure to maintain target secondary disinfection	Union Water (chloraminated) Trigger total Chlorine Residual      0.5 mg/L Target total Chlorine Residual      1.0 mg/L	Sampling & monitoring by UWSS & Municipal Operating Authority	SOP# 4 - Sampling and Monitoring SOP# 6 - Flushing

**Revision History**

Date	Revision #	Reason for Revision
26-Jan-09	0	Initial risk assessment conducted
28-Mar-11	1	Updates following Internal Audit

**Review History**

Date	Reason for Revision
3-Jun-14	12 month review
2-Dec-13	36 month reassessment

	<b>Kingsville Environmental Services</b> <b>Procedure 11:01</b> <b>Personnel Coverage</b>	Element: # 11:01 Issued: 26-Jan-09 Rev.#: 1 Pages: 1 of 1
<b>Reviewed by:</b> Corrine Gabriele Manager of Municipal Services	<b>Approved by:</b> Andrew Plancke Director of Municipal Services	

### 1.0 Purpose

To describe the procedure for ensuring that sufficient and competent personnel are available for duties that directly affect drinking water quality.

### 2.0 Scope

Applies to operations personnel at Kingsville Environmental Services Department.

### 3.0 Responsibility

- All employees of Kingsville Environmental Services Department
- QMS Representative(s)

### 4.0 Definitions

**Competence** – The combination of observable and measurable knowledge, skills, and abilities which are required for a person to carry out assigned responsibilities.

**Facility Log Book** – The combination of all individual operator's log books constitutes the facility log book.

### 5.0 Procedure

- 5.1 The Director of Municipal Services ensures that personnel meeting the competencies identified in the Competency Requirements Table are available for duties that directly affect drinking water quality.
- 5.2 Kingsville Environmental Services is staffed by personnel Monday to Friday, 7:30 a.m. - 4:00 p.m.
- 5.3 The Director of Municipal Services is the primary Overall Responsible Operator (ORO). The Public Works Manager is the designated Operator-in-Charge (OIC) and the alternate ORO in the absence of the Director.  
The designated ORO is recorded in the facility logbook.
- 5.4 The Director of Municipal Services (or designate) assigns an on-call operator based on the Overtime (OT) schedule during the time that the facility is un-staffed (i.e., evenings, weekends and Statutory Holidays).
- 5.5 In the event of a work stoppage, the Director of Municipal Services and the Public Works Manager will perform day-to-day operations and maintenance.

### 6.0 Related Documents


Facility Logbook  
 Overtime Schedule  
 Vacation Schedule  
 Collective Agreement

### 7.0 Revision History

Date	Revision #	Reason for Revision
26-Jan-09	0	Procedure issued
2-Dec-13	1	Updates following SAI Global Audit 2013

### 8.0 Review History

Date	Reason for Revision
3-Jun-14	12 month review
2-Dec-13	36 month reassessment

	<b>Kingsville Environmental Services</b> <b>Procedure 12:01</b> <b>Communications</b>	Element: #12:01 Issued: 26-Jan-09 Rev.#: 5 Pages: 1 of 1
<b>Reviewed by:</b> Corrine Gabriele Manager of Municipal Services	<b>Approved by:</b> Andrew Plancke Director of Municipal Services	

## 1.0 Purpose

To describe the Kingsville Environmental Services procedure for QMS-related communications between top management and the Owner, Operating Authority personnel, Suppliers and the public.

## 2.0 Scope

Applies to the internal and external communications regarding the Quality Management System (QMS) implemented at Kingsville Environmental Services

## 3.0 Responsibility

- QMS Representative(s)
- Operators

## 4.0 Definitions

**Public** – includes subject system consumers and stakeholders

## 5.0 Procedure

- 5.1 The status of the QMS and its effectiveness shall be communicated to the owner during scheduled owner meetings and with results from the Management review.
- 5.2 The operational plan and procedures will be made available to all employees.
  - Director of Municipal Services will communicate the QMS to all employees as part of the implementation process.
  - New hires will receive QMS awareness training during orientation.
- 5.3 Daily communications occur with operators using the Cityworks Service Request system of tracking and recording information. Hard copies of the Service Requests are distributed to the operators and the operators provide feedback written on the documents, which is entered electronically into the master Cityworks system.
- 5.4 Communications to the operators regarding the QMS will be posted on the QMS Bulletin Board.
- 5.5 Communications with Union Water System Operators and staff will be as required through email and telephone contact and are documented accordingly.
- 5.6 Where appropriate, information regarding the QMS, operation and maintenance of the drinking water system will be communicated by means of
  - Facsimile, mail or email submissions to regulatory agencies
  - Facsimile, mail or email submissions to vendors and service providers included in the Essential Supplies & Services Contact List
  - Media releases, website posting and/or water/tax bill inserts
  - Providing access to the current Kingsville Water Specifications on the Town website
  - Updated tender and/or contract packages
- 5.7 The QMS policy will be posted on the Owner's website and available upon request.

## **6.0 Related Documents**


Management Review Documents

## **7.0 Revision History**

<b>Date</b>	<b>Revision #</b>	<b>Reason for Revision</b>
26-Jan-09	0	Procedure issued
28-Mar-11	1	Updates following Internal Audit
28-Apr-11	2	Updates following CGSB Systems Audit Report – 2010
30-Sep-11	3	Updates following CAR Review
27-Feb-12	4	Updates following CAR Review
2-Dec-13	5	Updates following SAI Global Audit 2013

## **8.0 Review History**

<b>Date</b>	<b>Reason for Revision</b>
3-Jun-14	12 month review
2-Dec-13	36 month reassessment

	<b>Kingsville Environmental Services</b> <b>Procedure 13:01</b> <b>Essential Supplies &amp; Services</b>	Element: # 13:01 Issued: 26-Jan-09 Rev.#: 4 Pages: 1 of 4
<b>Reviewed by:</b> Shaun Martinho Manager of Public Works	<b>Approved by:</b> Andrew Plancke Director of Municipal Services	

## 1.0 Purpose

To describe the Kingsville Environmental Services procedure for procurement and for ensuring the quality of essential supplies and services.

This procedure identifies the supplies and services deemed essential to the delivery of safe drinking water and how to ensure the quality of essential supplies and services that can affect water quality.

## 2.0 Scope

Applies to essential supplies and services pertaining to Kingsville Environmental Services, as identified in this procedure.

## 3.0 Responsibilities

- QMS Representative(s)
- Operators

## 4.0 Definitions

**Essential Supplies and Services** – are goods and people coming in from outside of the drinking-water system that are essential for the quality and safety of drinking water.

**Supplier** – an organization or person that provides an essential supply product or service.

## 5.0 Procedure

5.1 Emergency/Essential Supplies & Services Contact List for Kingsville Environmental Services are listed **Table 1 – following this procedure**. The list is reviewed at least annually during the Internal Audit/Management Review and is updated as required by the Director of Municipal Services, or delegated QMS Representative.

### 5.2 Availability

An approved list of suppliers and contractors is maintained throughout the year. All suppliers and contractors must adhere to municipal policies and procedures.

Products and Services are obtained in accordance with the municipality's procurement policy manual for contractors, equipment, supplies, and services.

Previous history and reliability of particular contractors and suppliers is used to ensure reliability of service. Selected Contractors have demonstrated commitment to the Town to be available for and to perform emergency services.



### 5.3 Quality requirements – Supplies

All process components/equipment provided by the supplier must meet applicable regulatory requirements and industry standards for use in the drinking water system prior to their installation.

Historical data regarding quality of supplies is also used to select suppliers and provide confidence in the reliability of product.

### 5.4 Quality Requirements - Services.

All third party drinking water services are provided by accredited and licensed laboratories. Sampling is performed by certified operators.

All equipment utilized by Kingsville Environmental Services staff shall be maintained and calibrated as specified in the Manufacturers Specifications or provincial regulations. Only qualified personnel shall provide calibration services.

Certified operators supervise contracted services.

### 5.5 Communications

The supplies and services requirements will be communicated to all relevant personnel in Kingsville Environmental Services.

Purchasing policies and requirements will be communicated to suppliers and service providers.

## 6.0 Related Documents

Town of Kingsville Procurement Policy – Tab 2 pages 120-131

## 7.0 Revision History

Date	Revision #	Reason for Revision
26-Jan-09	0	Procedure issued
28-Apr-11	1	Updates following CGSB Systems Audit Report – 2010
30-Sep-11	2	Update following CAR Review
2-Dec-13	3	Updates following SAI Global Audit 2013
3-Mar-19	4	Updates to Table 1


## 8.0 Review History

Date	Reason for Revision
3-Jun-14	12 month review
2-Dec-13	36 month reassessment

**Table 1:**  
Emergency/Essential Supplies Contact List for Kingsville  
Environmental Services

SERVICES	SERVICE PROVIDER CONTACT INFO	
	PRIMARY	SECONDARY
Construction/ Excavation	Pro-Bid Contracting Inc Ruthven On, Office – 519 324-9166 Manuel Santos Cell 519-791-1399	Dimenna Excavating Contractors Ruthven ON, N0P 2G0 Office 519-322-4605 Dino Dimenna Cell 519-776-5109
Trucking	Pro-Bid Contracting Inc Ruthven On, Office – 519 324-9166 Manuel Santos Cell 519-791-1399	Dimenna Excavating Contractors Ruthven ON, N0P 2G0 Office 519-322-4605 Dino Dimenna Cell 519-796-1359
Construction/ Maintenance Vacuum Excavation/ pipe camera	Hurricane SMS 6930 6th Conc. N, Amherstburg, ON. N9V 2Y9 Shop 519-726-6388 Justin Cell 519-796-9259	Sewer Technologies Inc Windsor Office, ON Office 519-969-1466 Ken Muir Cell 519-990-4808
OCWA – sampling service provider on behalf of Union Water Supply system	OCWA 1615 Union Ave Ruthven Ontario. N0P 2G0 Dale Dillen 519-326-4447	
Lab Testing	Caduceon Environmental Laboratories 5 – 3201 Marentette Ave. Windsor, Ontario N8X 4G3 Tel: 519-966-9541 Fax: 519-966-9567	
Meter Calibration	KTI Limited 33 Isaacson Crescent Aurora, Ontario L4G 0A4 Tel: 905-727-8807 Fax: 905-727-6077	
Police	OPP 41 Division Street Kingsville, Ontario N9Y 1P4 519-733-2345 administrative 1-888-310-1122 Reports 911 for emergencies	OPP 116 County Rd 34 W Cottam, Ontario N0R 1B0
Fire	1720 Division Rd North Kingsville, Ontario 519-733-2314 Chuck Parsons, Fire Chief 911 for emergencies	120 Fox Street Cottam, Ontario
Ambulance	911 for emergencies	
WECHU	1005 Ouellette Ave. Windsor, Ontario N9A 4J8 519-258-8672 Dr. Aziz Ahmed	
MOE	Spills Action Centre 1-800-268-6060	

SUPPLIERS	SUPPLIER CONTACT INFO	
	PRIMARY	SECONDARY
Distribution Components Piping, hydrants, fittings, etc	Underground Specialties 5340 Walker Rd Oldcastle, Ontario N0R 1L0 Shop 519-737-1263 Glen Hudacek	EMCO Waterworks LTD. 2740 Temple Dr Windsor, ON. N8W 5J5 Office 519-944-3626 Dave Taylor
Distribution Components Piping, hydrants, fittings, etc	Evans Utility Supply 338 Neptune Crescent London, ON. N6M 1A1 Office 1-800-268-8309	
OCWA – sampling service provider on behalf of Union Water Supply system	OCWA 1615 Union Ave Ruthven Ontario. N0P 2G0 Gary Dunmore 519-326-4447	
Miscellaneous Suppliers	Fastenal Company 2 Iroquois Rd. Unit # 4 RR#4 Leamington On. Office 519-322-1800	Windsor Factory Supply 213 Talbot St West Leamington, ON. N8H 1N8 Counter 519-326-5767
	TSC Store 235 Talbot Street East Leamington, Ontario N8H 1N8 Counter 519-324-9658	

	<b>Kingsville Environmental Services</b> <b>Procedure 14:01</b> <b>Review and Provision of</b> <b>Infrastructure</b>	Element: # 14:01 Issued: 26-Jan-09 Rev.#: 0 Pages: 1 of 1
<b>Reviewed by:</b> Corrine Gabriele Manager of Municipal Services	<b>Approved by:</b> Andrew Plancke Director of Municipal Services	

## 1.0 Purpose

To describe Kingsville Environmental Services procedure for reviewing the adequacy of infrastructure necessary to operate and maintain the drinking water distribution system.

## 2.0 Scope

Applies to review and provision of infrastructure at Kingsville Environmental Services

## 3.0 Responsibility

- QMS Representative(s)

## 4.0 Definitions

**Infrastructure** – the set of interconnected structural elements that provide the framework for supporting the operation of the drinking water system, including buildings, workspace, process equipment, hardware and software and supporting services, such as transport or communication.

**Rehabilitation** – the process of repairing or refurbishing an infrastructure element.

**Renewal** – the process of replacing the infrastructure element with new elements.

## 5.0 Procedure

- 5.1 On an annual basis, the Director of Municipal Services conducts a review of the drinking water system's infrastructure to assess its adequacy for the operation and maintenance of the system.
- 5.2 A summary of maintenance and capital recommendations (Annual Maintenance Budget) will be submitted to the owner for review and comment. Upon authorization, timelines and responsibilities for implementation of items identified will be documented and scheduled.
- 5.3 The Director of Municipal Services will include the results of the recommendations and proposed timelines at the Management Review.

## 6.0 Related Documents


Annual Operational Budget and Capital Budget  
Management Review Documents  
Official Plan

## 7.0 Revision History

Date	Revision #	Reason for Revision
26-Jan-09	0	Procedure issued

## 8.0 Review History

Date	Reason for Revision
3-Jun-14	12 month review
2-Dec-13	36 month reassessment

	<b>Kingsville Environmental Services</b> <b>Procedure 16:01</b> <b>Sampling, Testing &amp; Monitoring</b>	Element: # 16:01 Issued: 26-Jan-09 Rev.#: 0 Pages: 1 of 2
<b>Reviewed by:</b> Corrine Gabriele Manager of Municipal Services	<b>Approved by:</b> Andrew Plancke Director of Municipal Services	

## 1.0 Purpose

To describe the Kingsville Environmental Services procedure for sampling, testing and monitoring for process control and finished drinking water quality.

## 2.0 Scope

Applies to sampling, testing and monitoring for the Kingsville's Environmental Service Department.

## 3.0 Responsibilities

- QMS Representative(s)
- Operators

## 4.0 Definitions

None

## 5.0 Procedure

- 5.1 All sampling, monitoring and testing is conducted at a minimum in accordance with SDWA O. Reg. 170/03. Adverse water quality incidents are responded to and reported as per regulations.
- 5.2 Samples are submitted to an accredited and licensed laboratory.  
The sampling schedule is maintained by the Union Water Supply System. OCWA performs that service on behalf of Union Water Supply System.  
Hardcopy reports are maintained at Union Water Supply Services.
- 5.3 Samples, testing and monitoring results are presented to the Owner by means of Annual and Summary Reports.
- 5.4 In-house sampling and flow monitoring activities are conducted on an as-needed basis by a certified operator and as shown in Table 1.

**Table 1 – In-House Sampling and Testing Schedule**

Parameter	Location	Frequency
Target chlorine residual (Non regulatory) as per Table 2, CCP, in Procedure 7/8:01	Identified dead ends	As required by Kingsville Environmental Services SOP

The results of these tests are recorded in the Flushing Log Book at the Kingsville Environmental Services Department.

- 
- 5.5 Pressures, and secondary disinfectant residual levels, are continuously monitored by Union Water Supply System.
  - 5.6 Additional sampling, for target chlorine residual is conducted in accordance with Table 1 above.
  - 5.7 Upstream adverse sample results at the Union Water Treatment Plant are communicated using the OCWA Adverse Sample Results Protocol, on behalf of Union Water Supply System.
  - 5.8 Sampling, testing and monitoring results are readily accessible at the Union Water Treatment Plant.

## **6.0 Related Documents**

SOPs

Flush Log (Chlorine Residual)

## **7.0 Revision History**

<b>Date</b>	<b>Revision #</b>	<b>Reason for Revision</b>
26-Jan-09	0	Procedure issued

## **8.0 Review History**

<b>Date</b>	<b>Reason for Revision</b>
3-Jun-14	12 month review
2-Dec-13	36 month reassessment

	<p>Kingsville Environmental Services Procedure 17:01 Measurement &amp; Recording Equipment Calibration &amp; Maintenance</p>	<p>Element: # 17:01 Issued: 26-Jan-09 Rev.#: 0 Pages: 1 of 2</p>
<p><b>Reviewed by:</b> Corrine Gabriele Manager of Municipal Services</p>		<p><b>Approved by:</b> Andrew Plancke Director of Municipal Services</p>

## 1.0 Purpose

To describe the Kingsville Environmental Services procedure for the calibration and maintenance of measurement and recording equipment.

## 2.0 Scope

Applies to the measurement and recording equipment in the Kingsville Environmental Services Department.

## 3.0 Responsibility

- QMS Representative(s)
- Operators

## 4.0 Definitions

None

## 5.0 Procedure

5.1 All measurement and recording equipment calibration and maintenance activities are performed by appropriately trained and qualified personnel of OCWA on behalf of Union Water Supply System.

5.2 OCWA, on behalf of Union Water System, establishes and maintains a list of all measurement and recording devices and associated calibration schedules.

Calibration and maintenance activities are carried out in accordance with procedures specified in the manufacturer's manual and frequency is documented in Table1.

**Table 1 - Measurement and Recording Equipment Calibration and Maintenance Information**

Sampling/Testing or Monitoring Parameter	Equipment	Method	Frequency	Schedule	Results
Chlorine Residuals	Hand held Hach	Manufacturer's Manual recommendations	Annually	As per Work Order	Flush Log

5.3 Calibration and maintenance records and maintenance/equipment manuals are maintained as per 5:01 Document and Records Control.

## 6.0 Related Documents

Calibration Certificates  
Flush Log (Chlorine Residual)

## 7.0 Revision History

Date	Revision #	Reason for Revision
26-Jan-09	0	Procedure issued

## 8.0 Review History

Date	Reason for Revision
3-Jun-14	12 month review
2-Dec-13	36 month reassessment



	<b>Kingsville Environmental Services Procedure 18:01 Emergency Management</b>	Proc.: #18:01 Issued: 26-Jan-09 Rev.#: 1 Pages: 1 of 2
<b>Reviewed by:</b> Corrine Gabriele Manager of Municipal Services	<b>Approved by:</b> Andrew Plancke Director of Municipal Services	

## 1.0 Purpose

To describe the Kingsville Environmental Services procedure for maintaining a state of emergency preparedness.

## 2.0 Scope

Applies to potential emergency situations or service interruptions identified for the water system operated by Kingsville Environmental Services.

## 3.0 Responsibility

- Owner
- QMS Representative(s)
- Operators

## 4.0 Definitions

***Municipal Emergency Plan*** – The emergency plan required by the Emergency Management and Civil Protection Act and adopted as a by-law by council, governing the provision of necessary services during an emergency and the procedures under and the manner in which employees of the municipality and other persons will respond to the emergency.

***Emergency*** – a potential situation or service interruption that may result in the loss of the ability to maintain a supply of safe drinking water to consumers.

***Emergency Response*** – the effort to mitigate the impact of an emergency on consumers.

## 5.0 Procedure

- 5.1 The Director of Municipal Services maintains the Emergency Response Plan and Emergency Management Procedure.
- 5.2 Table 1 describes the list of potential emergency situations or service interruptions. For each of these emergency situations/service interruptions, a step-by-step SOP defining the processes for response and recovery is in place.

**TABLE 1**

<b>POTENTIAL EMERGENCIES</b>	
<b>Description of Emergency</b>	<b>Potential Outcome</b>
Contamination of water either from the source or in the distribution system (i.e. low pressure, main break, loss of supply, etc.)	Health risk, contamination of treated water or environment, service disruption. Please refer to SOP Index to obtain appropriate SOP to be used.

- 1.1 Appropriate personnel are trained on this procedure and on specific emergency situations on an ongoing basis. Personnel are also trained by reviewing and testing the SOPs (used for emergencies). All training/testing is documented.
- 1.2 Operating Authority and Owner roles and responsibilities for Emergency Management are set out in the Roles and Responsibilities table in Element 9.
- 1.3 Relevant sections of the Town of Kingsville's Emergency Plan, which may also contain additional information on emergency roles and responsibilities, for those situations which affect drinking water are contained in the Town of Kingsville Municipal Offices.
- 1.4 An emergency/essential supplies and services contact list is maintained and available to all staff and updated at least annually.
- 1.5 As appropriate, communications during emergency situations or service interruptions are set out in the Town of Kingsville Emergency Plan/ SOPs/ communication protocol.
- 1.6 Any and all communications relative to the QMS and water distribution system during an emergency situation or service interruption will be the responsibility of the Director of Municipal Services or the ORO.

## 2.0 Related Documents

Municipal Emergency Response Plan  
Records of Training/testing/plan updates  
Emergency/Essential Supplies and Services Contact List  
SOPs – see index for SOPs

## 3.0 Revision History

Date	Revision #	Reason for Revision
26-Jan-9	0	Procedure issued
28-Mar-11	1	Updates following Internal Audit

## 4.0 Review History

Date	Reason for Revision
3-Jun-14	12 month review
2-Dec-13	36 month reassessment

	<div>Kingsville Environmental Services Procedure 19:01 Internal Audit</div>	<div>Proc.: #19:01 Issued: 26-Jan-09 Rev.#: 0 Pages: 1 of 15</div>
<div>Reviewed by: Corrine Gabriele Manager of Municipal Services</div>	<div>Approved by: Andrew Plancke Director of Municipal Services</div>	

## 1.0 Purpose

To describe the Kingsville's Environmental Services Department procedure for conducting internal audits at the facility level that evaluates the conformance to the requirements of the Drinking Water Quality Management Standard (DWQMS).

## 2.0 Scope

This procedure applies to the process of conducting internal audits at the Kingsville WDS.

## 3.0 Responsibility

- QMS Representative(s)

## 4.0 Definitions

**Audit** – a systematic and documented verification process that involves objectively obtaining and evaluating documents and processes to determine whether a quality management system conforms to the requirements of this Standard.

**Non-conformance** – the non-fulfillment of a DWQMS requirement

## 5.0 Procedure

- 5.1 The Director of Municipal Services or designate maintains the Internal Audit Procedure and schedules the internal QMS audit that addresses all DWQMS elements conducted for the facility on an annual basis. The Director of Municipal Services selects personnel to perform the audit considering adequate skills, training and/or experience.
- 5.2 The auditor evaluates conformity of the QMS with the requirements of the DWQMS by asking questions which are designed to encompass all of the requirements of the DWQMS.
- 5.3 The auditor will use the check list **following this procedure** developed from MOE's DWQMS and supporting documentation, to ensure all 21 elements of the DWQMS are addressed. (Not all 21 elements will necessarily be audited at the same time). Audits will include interviews with select staff of the Operating Authority, observation of operating practices, and review of documents. The auditor will document the audit findings in written reports to the Operating Authority.
- 5.4 The auditor reviews the facility's approved policies and procedures, the results of previous internal and external QMS audits, the status of corrective and preventive actions and other QMS-related documentation prior to the audit.

- 5.5 When nonconformity is identified through the internal audit process, an action plan to rectify the issue is developed by the Director of Municipal Services, specifying responsibility and a target date for resolution. The Director of Municipal Services monitors progress of the action plan related to the identified nonconformity until it is fully resolved.
- 5.6 The QMS Representative(s) ensures that results of the audit are included as input to the management review process.

## 6.0 Related Documents

Internal/External Checklist  
Internal/External Audit Reports  
Internal/External Action Plans

## 7.0 Revision History

Date	Revision #	Reason for Revision
26-Jan-09	0	Procedure issued

## 8.0 Review History

Date	Reason for Revision
3-Jun-14	12 month review
2-Dec-13	36 month reassessment

DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
<b>1. Quality Management System</b>  PLAN – The Operational Plan shall document a Quality Management System that meets the requirements of this standard.	PL			
DO – The Operating Authority shall establish and maintain the Quality Management System in accordance with the requirements of this Standard and the policies and procedures documented in the Operational Plan.	DO			
<b>2. Quality Management System Policy</b>  PLAN – The Operational Plan shall document a Quality Management System Policy that provides the foundation for the Quality Management System, and: a) is appropriate for the size and type of the subject system, b) includes a commitment to the maintenance and continual improvement of the Quality Management System, c) includes a commitment to the consumer to provide safe drinking water, d) includes a commitment to comply with applicable legislation and regulations, and e) is in a form that provides for ready communication to all Operating Authority personnel, the Owner and the public.	PL			
a)				
b)				
c)				
d)				
e)				
DO – The Operating Authority shall establish and maintain a Quality Management System that is consistent with the policy.	DO			

DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
<b>3. Commitment and Endorsement</b>  PLAN – The Operational Plan shall contain a written endorsement of its contents by top management and the Owner.	PL			
DO – top Management shall provide evidence of its commitment to an effective Quality Management System by: a) ensuring that a Quality Management System is in place that meets the requirements of this Standard, b) ensuring that the Operating Authority is aware of all applicable legislative and regulatory requirements, c) communicating the Quality Management System according to the procedure for communications, and d) determining, obtaining or providing the resources needed to maintain and continually improve the Quality Management System.	DO			
	a)			
	b)			
	c)			
	d)			
<b>4. Quality Management System Representative</b>  PLAN – The Operational Plan shall identify a Quality Management System representative.	PL			
DO – top management shall appoint, and authorize a Quality Management System representative who, irrespective of other responsibilities, shall: a) administer the Quality Management System by ensuring that processes and procedures needed for the Quality Management System are established and maintained, b) report to Top Management on the performance of the Quality Management System and any need for improvement, c) ensure that current versions of documents required by the Quality Management System are being used	DO			
	a)			
	b)			

DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
at all times, d) ensure that personnel are aware of all applicable legislative and regulatory requirements that pertain to their duties for the operation of the subject system, and e) promote awareness of the Quality Management System throughout the Operating Authority.	c)			
	d)			
	e)			
<b>5. Document and Records Control</b>  PLAN – The Operational Plan shall document a procedure for document and records control that describes how:  a) documents required by the Quality Management System are: i. kept current, legible and readily identifiable ii. retrievable iii. stored, protected, retained and disposed of, and b) records required by the Quality Management System are: i. kept legible, and readily identifiable ii. retrievable iii. stored, protected, retained and disposed of.	PL			
	a)i.			
	a)ii.			
	a)iii.			
	b)i.			
	b)ii.			
	b)iii.			
DO – The Operating Authority shall implement and conform to the procedure for document and records control and shall ensure that the Quality Management System documentation for the subject system includes:  a) the Operational Plan and its associated policies and procedures, b) documents and records determined by the	DO			
	a)			

DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
<b>(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")</b>	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
Operating Authority as being needed to ensure the effective planning, operation and control of its operations, and c) the results of internal and external audits and management reviews.	b)			
	c)			
<b>6. Drinking-Water System</b>  PLAN – The Operational Plan shall document, as applicable: a) for the subject system: i. a description of the system including all treatment processes and distribution system components ii. the name of the Owner and Operating Authority iii. a process flow chart iv. a description of the water source, including: i. general characteristics of the raw water supply ii. common event-driven fluctuations and iii. any resulting operational challenges and threats v. a description of any critical upstream or downstream processes relied upon to ensure the provision of safe drinking water. b) if the subject system is an operational subsystem, a summary description of the municipal residential drinking-water system it is a part of. c) if the subject system is connected to one or more other drinking-water systems owned by different owners, a summary description of those systems which: i. indicates whether the subject system obtains water from or supplies water to those systems, and ii. names the Owner and Operating Authority of those systems.	PL			
	i.			
	ii.			
	iii.			
	iv.			
	i.			
	ii.			
	iii.			
	v.			
	b)			
	c)			



DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
	i.			
	ii.			
DO – The Operating Authority shall ensure that the description of the drinking-water system is kept current.	DO			
<b>7. Risk Assessment</b> PLAN – The Operational Plan shall document a risk assessment process that: a) identifies potential hazardous events and associated hazards b) assesses the risks associated with the occurrence of hazardous events c) ranks the hazardous events according to the associated risk d) identifies control measures to address the potential hazards and hazardous events e) identifies critical control points f) identifies a method to verify at least once a year, the currency of the information and the validity of the assumptions used in the risk assessment g) ensures that a risk assessment is conducted at least once every thirty-six months, and h) considers the reliability and redundancy of equipment.	PL			
	a)			
	b)			
	c)			
	d)			
	e)			
	f)			
	g)			
	h)			
DO – The Operating Authority shall perform a risk assessment consistent with the documented process.	DO			

DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
<b>8. Risk Assessment Outcomes</b>	PL			
PLAN – The Operational Plan shall document:				
a) the identified potential hazardous events and associated hazards	a)			
b) the assessed risks associated with the occurrence of hazardous events	b)			
c) the ranked hazardous events	c)			
d) the identified control measures to address the potential hazards and hazardous events	d)			
e) the identified critical control points and their respective critical control limits	e)			
f) procedures and/or processes to monitor the critical control limits	f)			
g) procedures to respond to deviations from the critical control limits, and	g)			
h) procedures for reporting and recording deviations from the critical control limits.	h)			
DO – The Operating Authority shall implement and conform to the procedures.	DO			
<b>9. Organizational Structure, Roles, Responsibilities and Authorities</b>	PL			
PLAN – The Operational Plan shall:				
a) describe the organizational structure of the Operating Authority including respective roles, responsibilities and authorities	a)			
b) delineate corporate oversight roles, responsibilities and authorities in the case where the Operating Authority operates multiple subject systems	b)			
c) identify the person, persons or group of people within the management structure of the organization responsible for undertaking the Management Review				

DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
d) identify the person, persons or group of people, having top management responsibilities required by this Standard, along with their responsibilities, and e) identify the Owner of the subject system.	c)			
	d)			
	e)			
DO – The Operating Authority shall keep current the description of the organizational structure including respective roles, responsibilities and authorities, and shall communicate this information to Operating Authority personnel and the Owner.	DO			
<b>10. Competencies</b>  PLAN – The Operational Plan shall document: a) competencies required for personnel performing duties directly affecting drinking water quality b) activities to develop and maintain competencies for personnel performing duties directly affecting drinking water quality, and c) activities to ensure that personnel are aware of the relevance of their duties and how they affect safe drinking water.	PL			
	a)			
	b)			
	c)			
DO – The Operating Authority shall undertake activities to: a) meet and maintain competencies for personnel directly affecting drinking water quality and shall maintain records of these activities, and b) ensure that personnel are aware of the relevance of	DO			
	a)			

DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
their duties and how they affect safe drinking water, and shall maintain records of these activities.	b)			
<b>11. Personnel Coverage</b>  PLAN – The Operational Plan shall document a procedure to ensure that sufficient personnel meeting identified competencies are available for duties that directly affect drinking water quality.	PL			
DO – The Operating Authority shall implement and conform to the procedure.	DO			
<b>12. Communications</b> PLAN – The Operational Plan shall document a procedure for communications that describes how the relevant aspects of the Quality Management System are communicated between top management and: a) the Owner b) Operating Authority personnel c) suppliers, and d) the public.	PL			
	a)			
	b)			
	c)			
	d)			
DO – The Operating Authority shall implement and conform to the procedure.	DO			
<b>13. Essential Supplies and Services</b>  PLAN – The Operational Plan shall: a) identify all supplies and services essential for the delivery of safe drinking water and shall state, for each supply or service, the means to ensure its procurement, and b) include a procedure by which the Operating	PL			
	a)			

DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
<b>(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")</b>	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
Authority ensures the quality of essential supplies and services, in as much as they may affect drinking water quality.	b)			
DO – The Operating Authority shall implement the procedure.	DO			
<b>14. Review and Provision of Infrastructure</b>  PLAN – The Operational Plan shall document a procedure for the annual review of the adequacy of the infrastructure necessary to operate and maintain the subject system.	PL			
DO – The Operating Authority shall implement and conform to the procedure and communicate the findings of the review to the Owner.	DO			
<b>15. Infrastructure Maintenance, Rehabilitation and Renewal</b>  PLAN – The Operational Plan shall document a summary of the Operating Authority's infrastructure maintenance, rehabilitation and renewal programs for the subject system.	PL			
DO – The Operating Authority shall:	PL			
a) keep the summary current	a)			
b) communicate the programs to the Owner, and	b)			
c) monitor the effectiveness of the maintenance program.	c)			
<b>16. Sampling, Testing and Monitoring</b>  PLAN – The Operational Plan shall document:	PL			
a) a sampling, testing and monitoring procedure for process control and finished drinking water quality including requirements for sampling, testing and monitoring at the conditions most challenging to the subject system	a)			

DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
b) a description of any relevant sampling, testing or monitoring activities that take place upstream of the subject system, and	b)			
c) a procedure that describes how sampling, testing and monitoring results are recorded and shared between the Operating Authority and the Owner, where applicable.	c)			
DO – The Operating Authority shall implement and conform to the procedures.	DO			
<b>17. Measurement and Recording Equipment Calibration and Maintenance</b>  PLAN – The Operational Plan shall document a procedure for the calibration and maintenance of measurement and recording equipment.	PL			
DO – The Operating Authority shall implement and conform to the procedure.	DO			
<b>18. Emergency Management</b>  PLAN – The Operational Plan shall document a procedure to maintain a state of emergency preparedness that includes: a) a list of potential emergency situations or service interruptions b) processes for emergency response and recovery c) emergency response training and testing requirements d) Owner and Operating Authority responsibilities during emergency situations e) references to municipal emergency planning measures as appropriate, and f) an emergency communication protocol and an up-to-date list of emergency contacts.	PL			
a)	a)			
b)	b)			
c)	c)			
d)	d)			
e)	e)			

DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
	f)			
DO – The Operating Authority shall implement and conform to the procedure.	DO			
<b>19. Internal Audits</b> PLAN – The Operational Plan shall document a procedure for internal audits that: a) evaluates conformity of the QMS with the requirements of this standard, b) identifies internal audit criteria, frequency, scope, methodology and record-keeping requirements, c) considers previous internal and external audit results, and d) describes how Quality Management System corrective actions are identified and initiated.	PL			
	a)			
	b)			
	c)			
	d)			
DO – The Operating Authority shall implement and conform to the procedure and shall ensure that internal audits are conducted at least once every twelve months.	DO			
<b>20. Management Review</b> PLAN - The Operational Plan shall document a procedure for management review that evaluates the continuing suitability, adequacy and effectiveness of the Quality Management System and that includes consideration of: a) incidents of regulatory non-compliance b) incidents of adverse drinking-water tests c) deviations from critical control point limits and response actions	PL			
	a)			
	b)			
	c)			
	d)			

DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
<b>(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")</b>	y/n	y/n	y/n	<b>Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one</b>
d) the efficacy of the risk assessment process	e)			
e) internal and third-party audit results	f)			
f) results of emergency response testing	g)			
g) operational performance	h)			
h) raw water supply and drinking water quality trends	i)			
i) follow-up on action items from previous management reviews	j)			
j) the status of management action items identified between reviews	k)			
k) changes that could affect the Quality Management System	l)			
l) consumer feedback	m)			
m) the resources needed to maintain the Quality Management System	n)			
n) the results of the infrastructure review	o)			
o) Operational Plan currency, content and updates, and	p)			
p) staff suggestions.				
DO – top management shall implement and conform to the procedure and shall:	DO			
a) ensure that a management review is conducted at least once every twelve month	a)			
b) consider the results of the management review and identify deficiencies and actions items to address the deficiencies	b)			
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	c)			
d) report the results of the management review, the identified deficiencies, decisions and action items to the Owner.				



DWQMS Requirement	Method in Place?	Documented?	Gap?	Notes
(Based on MOE's "Implementing Quality Management: A Guide for Ontario's Drinking Water Systems")	y/n	y/n	y/n	Include need for documentation, training, additional attention to specific items in the DWQMS, etc. that may be a non conformance or could lead to one
	d)			
<b>21. Continual Improvement</b>  DO- The Operating Authority shall strive to continually improve the effectiveness of its Quality Management System through the use of corrective actions.	DO			

	<div>Kingsville Environmental Services Procedure 20:01 Management Review</div>	<div>1</div> <div>Element: # 16:01 Issued: 26-Jan-09 Rev.#: 0 Pages: 1 of 3</div>
Reviewed by: Corrine Gabriele Manager of Municipal Services		Approved by: Andrew Plancke Director of Municipal Services

## 1.0 Purpose

To describe the Kingsville WDS procedure for a Management Review of the Quality Management System (QMS) at the facility level.

## 2.0 Scope

Applies to the review by Top Management for Kingsville Environmental Services of the QMS implemented for Kingsville WDS.

## 3.0 Responsibility

- QMS Representative(s)

## 4.0 Definitions

**Management Review** – a process where a higher level of managers in the operating authority considers various indicators within the QMS.

## 5.0 Procedure

- 5.1 The Director of Municipal Services determines a suitable frequency for Management Review meetings for the drinking water system. As a minimum, reviews must be conducted at least once every 12 months.
- 5.2 The standing agenda for Management Review meetings is as follows:
  - a) Incidents of regulator non-compliance
    - MOE inspection reports, annual reports to the MOE
  - b) Incidents of adverse drinking water tests
    - Annual reports and adverse reports to the MOE
  - c) Deviations from critical control limits and response actions
    - Adverse reports to the MOE, call-in reports, logbook entries
  - d) The efficacy of the risk assessment process
    - Review of Summary of Risk Assessment Outcomes
  - e) Internal and third-party audit results
    - Audit reports and action plans
    - Distribution and Implementation of revised documents
  - f) Results of emergency response testing

- Facility Emergency Plan, training records, related test documentation specific to the water distribution system
- g) Review of Emergency Response Supplies
  - Annual review of Emergency/Essential Supplies and Services Contact List for Kingsville Environmental Services
- h) Operational Performance
  - MOE Inspection rating reports
  - Review operational activities in Cityworks system
  - Review key performance indicators – overtime callouts, watermain breaks, after hour emergency calls
- i) Water supply and drinking water quality trends
  - Drinking Water facility description in Operational Plan, annual reports to MOE, flushing trends, consumer feedback
  - FIR Annual Performance Measures Reports
- j) Follow-up on action items from previous Management Reviews
  - Minutes and action plans
- k) The status of management action items identified between reviews
  - Action plans, memos, correspondence to Operating Authority staff
- l) Changes that could affect the QMS
- m) Consumer feedback
  - Logbooks
  - Cityworks Service Requests
- n) The resources needed to maintain the QMS
  - Adequate Staffing levels
    - i. Administrative Staff for data input
    - ii. Operational Staff for review and input
    - iii. QMS representatives for monitoring, improvements, updating and distribution
- o) The results of the infrastructure review
  - Annual Maintenance Budget (See element 14)
- p) Operational Plan currency, content and updates, and
  - Operational Plan including QMS Procedures
- q) Staff suggestions
  - Correspondence.

The QMS Representative(s) coordinates the Management Review and ensures that the agenda with identified responsibilities is distributed to all participants in advance of the Management Review meeting along with any related reference materials.

- 5.3 The Management review participants review all data presented and make recommendations and/or initiate action plans to address identified deficiencies as appropriate.
- 5.4 The QMS Representative ensures that minutes of and action plans resulting from the Management Review meeting are prepared and distributed to the management in the Kingsville Environmental Services and to the owner.
- 5.5 The Director of Municipal Services monitors the progress and documents the completion of action plans resulting from the Management Review.

## 6.0 Related Documents

Management Review Documents  
Audit Reports

## 7.0 Revision History

Date	Revision #	Reason for Revision
26-Jan-09	0	Procedure issued
28-Mar-11	1	Updates following Internal Audit
2-Dec-13	2	Updates following SAI Global Audit 2013

## 8.0 Review History

Date	Reason for Revision
3-Jun-14	12 month review
2-Dec-13	36 month reassessment

	<p style="text-align: center;"><b>Kingsville Environmental Services Procedure 20:01 Management Review</b></p>		<p style="text-align: right;">1</p> <p>Element: # 16:01 Issued: 26-Jan-09 Rev.#: 0 Pages: 1 of 1</p>
<p><b>Reviewed by:</b> Corrine Gabriele Manager of Municipal Services</p>	<p><b>Approved by:</b> Andrew Plancke Director of Municipal Services</p>		

## Appendix B Index

SOP ID#1	Fire Hydrant – Flushing
SOP ID#2	Fire Hydrant – Replacement
SOP ID#3	Low Pressure – Residual
SOP ID#4	Sample Collection
SOP ID#5	Water Service – Low Pressure/Service Leaks
SOP ID#6	Watermain – Blow Off Flushing Maintenance
SOP ID#7	Watermain – Placing New Mains in Service
SOP ID#8	Watermain – Maintenance of Valves
SOP ID#9	Watermain – Repair Broken Valve
SOP ID#10	Category 1 Watermain Break(s) – General Repairs
SOP ID#11	Category 2 Watermain Break(s) – Repairs to Dewatered Mains
SOP ID#12	Category 2 Watermain Break(s) – Repairs to Potentially Contaminated Watermains
SOP ID#13	Emergency Interconnect