















































































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

Multiply 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 12 or greater are considered high risk.

5.7 Review the hazardous events and rankings documented in Table 1 and identify any activity/process step as an additional CCP if all of the following criteria are met:

- ✓ The associated hazardous event has a ranking of 12 or greater
- ✓ The associated hazardous event can be controlled through control measure(s)
- ✓ Operation of the control measures can be monitored and corrective actions can be applied in a timely fashion
- ✓ Specific control limits can be established for the control measure(s)
- ✓ Failure of the control measures would lead to immediate notification of Medical Officer of Health (MOH) or Ministry of the Environment (MOE) or both.

5.8 List identified CCPs (required minimum and any additional CCPs established by the risk assessment) in Table 2. Set related critical control limits (e.g., limits for turbidity, chlorine residual, temperature, pH) for each CCP as appropriate.

5.9 Ensure procedures have been developed and implemented at the facility to:

- Monitor the critical control limits
- Respond to, report and record deviations from the critical control limits.

List these procedures in Table 2.

5.10 The information recorded in the Summary of Risk Assessment Outcomes is maintained at the facility level on an ongoing basis. At least once a year, the PCT, in conjunction with the facility level top management and/or operations staff, reviews the risk assessment documentation to verify the currency of the information and the validity of the assumptions used in the risk assessment in preparation for the Management Review.

5.11 The Senior Operations Manager ensures that a risk assessment is conducted and documented at least once every thirty-six months.

## 6.0 Related Documents

QP-09 Emergency Management  
 Summary of Risk Assessment Outcomes (facility-specific)

## 7.0 Revision History

<b>Date</b>	<b>Revision</b>	<b>Reason for Revision</b>
2010-02-01	0	Procedure issued
2012-01-11	1	Clarification of wording for Scope (2.0) and Procedure 5.7. Procedure 5.10 revised to reflect changes of the review process for the risk assessment.
2013-03-15	2	Change title of plan to 'Chapleau Water Treatment System'. Revised position titles; Operations Manager has been changed to Senior Operations Manager, Cluster Manager has been changed to Operations Manager, and Process Compliance Manager has been removed as the position was discontinued.



## Summary of Risk Assessment Outcomes

### Chapleau Water Treatment System

**Table 1 - Risk Assessment Table**

Note: Processes referred to in section 5.4 of QP-02 Risk Assessment and Risk Assessment Outcomes must be identified as mandatory Critical Control Points (CCPs) as applicable for all OCWA-operated facilities. Mandatory CCPs are not required to be ranked.

Activity/ Process Step	Description of Hazardous Event	Possible Outcome (Hazards)	Existing Control Measures	Likelihood	Consequence	Risk Value	CCP?
Source/Intake	Spill of biological or chemical material into Kebaquasheshing River (boats, train, aircraft and snow mobiles, wastewater spill from upstream lumber mill, chemical spill from upstream co-generation plant, beaver activity, chemical spill from electric station, fire risks at industrial facilities – runoff from firewater concentrated in metals and chemicals)	Contamination of source water	When notified, staff will take appropriate response action Monitor and sample Daily grab samples during Monday – Friday for; pH, colour, turbidity. Weekly grab samples for alkalinity Site specific Environmental Emergency Procedure (EEP) for Off-site Chemical/Fuel Spill Site specific EEP for Contaminated Raw Water	4	3	12	<input type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input checked="" type="checkbox"/> No - no controls
	Breakage/blockage of intake pipe	Loss of water supply	None – staff would take appropriate response measures Low lifts can push process water through intake to clear it out under emergency situations	1	2	2	
	Changes in river depth and temperature	Increased demand on process operations and potential decrease in supply	Daily grabs for temperature Monitor river depth Staff would take appropriate response measures if the changes were affecting operations	3	2	6	
	Spring/fall turnover	Increased demand on process operations such as chemical optimization for changes in pH, alkalinity, temperature and turbidity.	Staff would keep higher alkalinity and make appropriate operational changes Treated Water Turbidity Alarms Daily grabs	4	2	8	

Activity/ Process Step	Description of Hazardous Event	Possible Outcome (Hazards)	Existing Control Measures	Likelihood	Consequence	Risk Value	CCP?
Low Lift Pumps	Low lift pump failures	Loss of water supply	Redundancy (3 pumps), scheduled maintenance activities, back-up generator for loss of power situations, alarms for power loss and low clearwell level, pump failure alarm Site specific EEP for Low Lift Pump Failure	3	2	6	<input type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input checked="" type="checkbox"/> No
Filtration Process (includes flocculation, coagulation, dual media gravity filters)	Aluminum Sulphate feed pump failure	Ineffective removal of pathogens (minimum treatment requirements not met)	Redundancy (2 pumps), operator inspections (tank levels, calculate dosage), scheduled maintenance activities, pump failure alarm and plant shut down Site specific EEP for Aluminum Sulphate Pump Failure				<input checked="" type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input type="checkbox"/> No
	Polymer feed pump failure	Increased turbidity, ineffective removal of pathogens	Redundancy (3 pumps), operational control, operator inspections (tank levels, calculate dosage), scheduled maintenance activities, chemical pump failure alarm				<input type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input type="checkbox"/> No
	Pre-Soda Ash feed pump failure	Increased turbidity, ineffective removal of pathogens	Redundancy (2 pumps), operator inspections (tank levels, calculate dosage), scheduled maintenance activities, pump failure alarm and plant shut down Site specific EEP for Soda Ash Pump Failure				
	Chemical tank rupture	Loss of chemical, increased turbidity, ineffective removal of pathogens, potential for AWQI	Redundancy (2 tanks for alum, pre and post soda ash). Spill containment for all chemicals, chemical pump failure alarm, turbidity alarm				
	Filter breakthrough	Increased turbidity, ineffective removal of pathogens, potential for	Redundancy (2 filters), on-line monitoring of filter effluent turbidity, alarm on high turbidity, regular backwashes, scheduled				

Activity/ Process Step	Description of Hazardous Event	Possible Outcome (Hazards)	Existing Control Measures	Likelihood	Consequence	Risk Value	CCP?
		AWQI	maintenance activities, Site specific EEP for Reporting and Responding to Adverse Turbidity in Large Municipal Residential Systems				
	Backwash system failure	Increased turbidity, ineffective removal of pathogens, potential for loss of treated water supply and AWQI	On-line monitoring, scheduled maintenance activities, alternate system for backwashing (manual or automated) Site specific EEP for Backwash Failure (Filters)				
	Turbidity meter failure	Unknown turbidity levels, potential for AWQI	Filter redundancy (take filter out of service until analyzer replaced/repared), scheduled maintenance activities, in-house readings, operator inspections				
Clearwells/Reservoir	Low level	Inadequate contact time for primary disinfection Inadequate treated water supply	Redundancy (3 clearwells and 3 reservoirs), schedule maintenance and inspection activities, low level clearwell alarm, town ordered water conservation or ban, CT calc Site specific EEP for Water Supply Shortage	3	2	6	<input type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input checked="" type="checkbox"/> No
	Clearwell out of service for repair, maintenance	Inadequate contact time for primary disinfection	Two-celled clearwell with isolation valves, increase chlorine dosage into clearwell, schedule controlled maintenance plan	3	2	6	
	Damage to outside hatch above reservoir	Potential for AWQI	Hatch is locked and regularly inspected.	2	3	6	
Chlorine Gas System (for primary disinfection)	Vacuum chlorinator failure	Loss of disinfection Low chlorine residual Inadequate inactivation of pathogens Potential for AWQI	Redundancy (2 chlorinators) In-house residual testing and dosage calculations Scheduled maintenance activities EEP for Vacuum Chlorinator Failure EEP for Low or High Chlorine Residual in Treated Water Standard Operating Procedure (SOP) for				<input checked="" type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input type="checkbox"/> No



Activity/ Process Step	Description of Hazardous Event	Possible Outcome (Hazards)	Existing Control Measures	Likelihood	Consequence	Risk Value	CCP?
			CT EEP for Reporting and Responding to Adverse Chlorine Residuals in Large Municipal Residential Systems (LMRS) Contingency Plan for Adverse Water/Potential and/or Unsafe Water				
	Cylinder failure	Loss of disinfection Low chlorine residual Inadequate inactivation of pathogens Potential for AWQI	Redundancy (1 standby cylinder) In-house residual testing and dosage calculations Scheduled maintenance activities Leak detection alarm EEP for Self Contained Breathing Apparatus EEP for Chlorine Cylinder Repair Kit				
	Analyzer failure	Unknown chlorine residual levels Potential for AWQI	Low chlorine residual alarm In-house residual testing Scheduled maintenance activities Spare parts SOP for Chlorine CT				
	Low supply of chlorine gas	Inadequate disinfection Potential for AWQI	Operator checks Chemical available within hub SOP for Chemical Sources				
Secondary Disinfection (Chloramination)	Pump failure	Loss of combined residual in distribution Failure to control biofilm and pathogens (longterm) Potential AWQI	Continuous on-line monitoring of total chlorine residual into the distribution system System-wide residual testing Scheduled maintenance (performed by township public works), Alarms for low/high chlorine residual in water entering distribution system EEP for Reporting and Responding to Adverse Chlorine Residuals in LMRS				<input checked="" type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input type="checkbox"/> No

Activity/ Process Step	Description of Hazardous Event	Possible Outcome (Hazards)	Existing Control Measures	Likelihood	Consequence	Risk Value	CCP?
	Low supply of ammonium sulphate	Inadequate disinfection Potential for AWQI	Operator checks Chemical available within hub SOP for Chemical Sources				
	Analyzer failure	Unknown chlorine residual levels Potential for AWQI	Low level alarm on total chlorine residual In-house residual testing Scheduled maintenance activities Free chlorine analyzer available for CT EEP for Low or High Chlorine Residual in Treated Water EEP for Reporting and Responding to Adverse Chlorine Residuals in Large Municipal Residential Systems (LMRS)				
	Post Soda Ash feed pump failure	Decreased pH in distribution system, increased colour	Redundancy (2 pumps), operator inspections (tank levels, calculate dosage), scheduled maintenance activities, pump failure alarm and plant shut down Site specific EEP for Soda Ash Pump Failure				
High Lift	High lift pump failures	Low pressure in distribution system, possible contamination due to infiltration	Redundancy (6 pumps), scheduled maintenance activities, operational control, on-line monitoring of discharge pressure, alarms for low pressure and pump failure, Site specific EEP for High Lift Pump Failure, EEP for Low Pressure Events in the Distribution System.	3	2	6	<input type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input checked="" type="checkbox"/> No
Distribution System	Adverse Water Quality Result as described in O. Reg. 170/03	Potential for unsafe drinking water	Site specific SOP Sampling Schedule EEP for Reporting and Responding to Adverse Results in Large Municipal Residential Systems (several EEPs)	3	3	9	<input type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input checked="" type="checkbox"/> No

Activity/ Process Step	Description of Hazardous Event	Possible Outcome (Hazards)	Existing Control Measures	Likelihood	Consequence	Risk Value	CCP?
	Loss of residual in the distribution system	Potential for unsafe drinking water	Distribution system monitoring, flushing, system maintenance by the Township public works department, EEP for Reporting and Responding to Adverse Chlorine Residuals in Large Municipal Residential Systems (LMRS)				<input checked="" type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input type="checkbox"/> No
Water Treatment System	Power failure	Loss of treated water supply	Back-up diesel generator, Scheduled maintenance activities for back-up generator, Low fuel level alarm (gen-set), EEP for Power Failure of Long Duration, EEP for Standby Power Failure.	3	2	6	<input type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input checked="" type="checkbox"/> No
	Standby power failure	Loss of treated water supply	Power failure alarm Standby generator available within 6-8 hours	3	4	12	<input type="checkbox"/> Yes – Mandatory CCP <input type="checkbox"/> Yes – Additional CCP identified for facility <input checked="" type="checkbox"/> No – no controls available

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

CCP	Critical Control Limits	Monitoring Procedures	Response, Reporting and Recording Procedures
Filtration Process	<p><b>Alum, Soda Ash and Polymer Feed</b> Both pumps fail an alarm is initiated</p> <p><b>Filter Effluent Turbidity Alarms (Filters 1-2)</b> High set point = 1.00 NTU</p>	<ul style="list-style-type: none"> <li>• SCADA (continuous online analyzers)</li> <li>• Daily operator checks including dosage calculations</li> <li>• redundancy (2 filters)</li> <li>• Trend review and sign-off as per O. Reg. 170/03</li> </ul>	<p>Refer to:</p> <ul style="list-style-type: none"> <li>• Site specific EEP for Reporting and Responding to Adverse Turbidity in Large Municipal Residential Systems</li> <li>• Site specific EEP for Backwash Failure (Filters)</li> </ul>
Primary Disinfection	<p><b>Free Chlorine Residual Alarms - Treated Alarms</b> Low set point = 1.00 mg/L High set point = 3.50 mg/L</p>	<ul style="list-style-type: none"> <li>• SCADA (continuous online analyzers)</li> <li>• Daily operator checks including dosage calculations</li> <li>• Trend review and sign-off as per O. Reg. 170/03</li> </ul>	<p>Refer to:</p> <ul style="list-style-type: none"> <li>• Site specific SOP for CT</li> <li>• Site specific EEP for Low or High Chlorine Residual in Treated Water</li> <li>• EEP for Reporting and Responding to Adverse Chlorine Residuals in Large Municipal Residential Systems</li> </ul>
Secondary Disinfection	<p><b>Combined Chlorine Residual - Distribution</b> Low = 0.25 mg/L High = 3.0 mg/L</p> <p><b>Free Chlorine Residual – Distribution</b> Low = 0.05 mg/L</p>	<ul style="list-style-type: none"> <li>• Distribution chlorine residuals monitored as per O. Reg. 170/03</li> </ul>	<p>Refer to:</p> <ul style="list-style-type: none"> <li>• EEP for Reporting and Responding to Adverse Chlorine Residuals in Large Municipal Residential Systems.</li> </ul>

The Drinking Water Quality Management Standard (DWQMS) requires that the currency of the information and the validity of the assumptions used in the risk assessment be verified at least once a year. In addition, the risk assessment must be conducted at least once every thirty-six months. Refer to steps 5.10 and 5.11 of QP-02.

**Table 3 - Record of Annual Review/36-Month Risk Assessment**

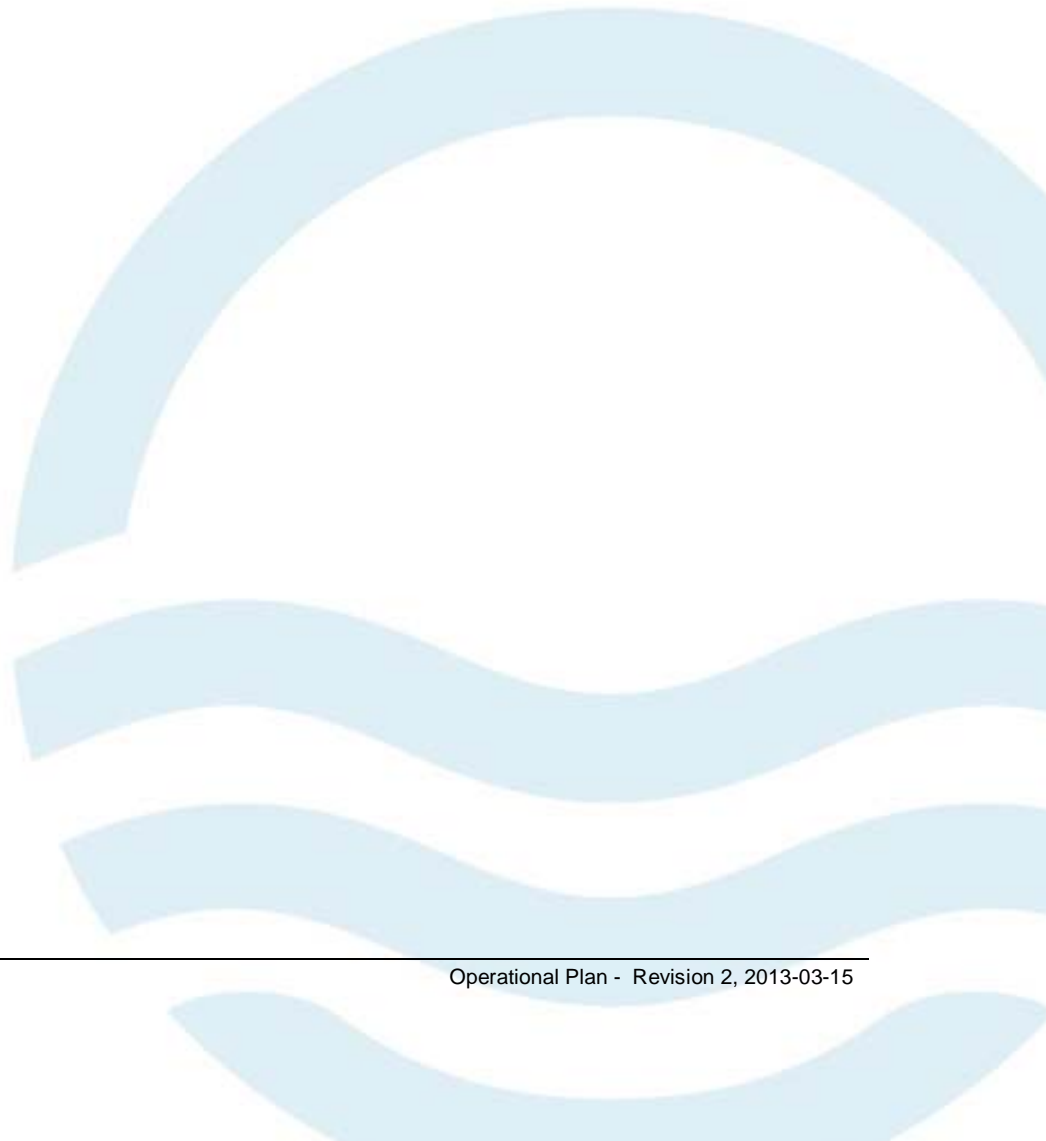
Date of Activity	Type of Activity	Participants	Summary of Results
2009-08-20	Risk Assessment	Amanda Dubuc (Process Compliance Technician), Chad Byce (Overall Responsible Operator), Rick Coote (Operator)	Conducted initial risk assessment.
2009-11-27	Review	Amanda Dubuc (PCT)	Desktop review prior to submission of Partial Accreditation application. No changes.
2010-10-04	Review	Amanda Dubuc (PCT), Eric Nielson (Senior Operations Manager), Chad Byce (ORO), Rick Coote (Operator)	Review during Internal Audit. No changes.
2010-10-14	Review	Amanda Dubuc (PCT), Eric Nielson (SOM), Brian Jibb (Operations Manager), Tony Janssen (SOM)	Review during management review meeting. No changes.
2011-08-09	Review	Amanda Dubuc (PCT), Eric Nielson (SOM), Chad Byce (ORO), Rick Coote (Operator), Josee Rousseau (Operator)	Review during Internal Audit. No changes.
2011-12-20	Review	Amanda Dubuc (PCT), Eric Nielson (PCM), Brian Jibb (OM), Tony Janssen (SOM)	Review during management review meeting. No changes.
2012-08-01	Review	Lisa Stasiuk (Regional Compliance Advisor), Amanda Dubuc (PCT), Ilona Bruneau (PCT), Chad Byce (ORO)	Review during Internal Audit. Changes listed in the revision history.
2012-08-30	Risk Assessment	Amanda Dubuc (PCT) and Chad Byce (ORO)	Conducted 36 month risk assessment re-do. Changes listed in the revision history.
2013-04-29	Review	Amanda Dubuc (PCT), Lisa Stasiuk (RCA), Chad Byce (ORO)	Review during external audit review. Changed set points in Table 2.

## Revision History

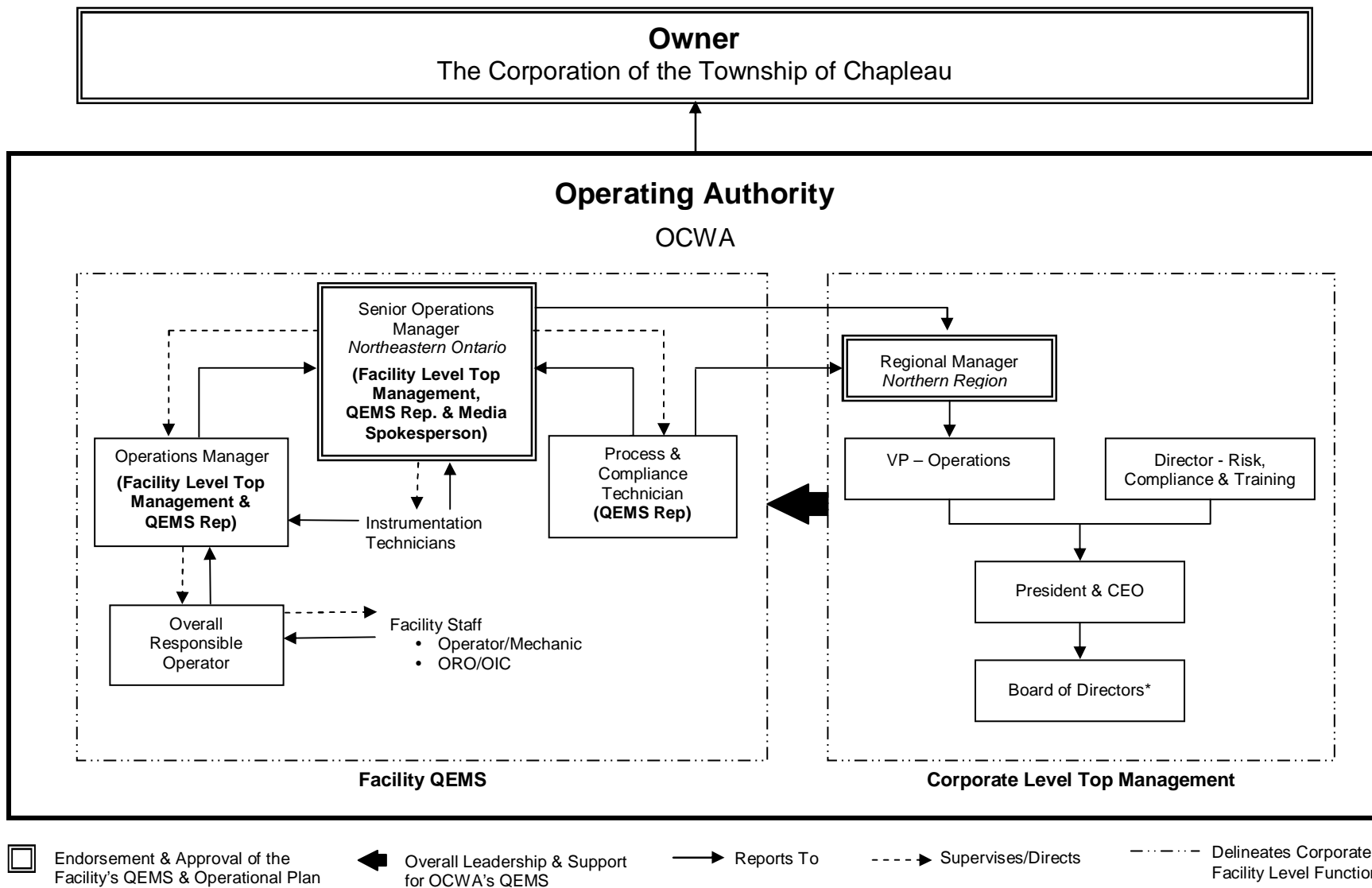
<b>Date</b>	<b>Revision</b>	<b>Description of Revision</b>
2009-08-20	0	Initial risk assessment conducted
2012-01-11	1	Template revised to include 'Record of Annual Review/36-Month Risk Assessment' (Table 3)
2012-11-09	2	Changed the title of the facility to Chapleau Water Treatment System. Added 'daily grab sample during Monday-Friday for pH, colour and turbidity, weekly alkalinity testing' as an existing control measure at the source, re-ranked the likelihood and consequence of biological spill, added 'pump failure alarm' as a control measure for low lift pumps, added 'pump failure alarm and plant shut down' as a control measure for alum feed pump failure, removed 'note' under polymer feed pump, added 'chemical tank rupture' and 'pre-soda ash feed pump failure' as a hazardous event to the filtration process, changed clearwell redundancy from '2 to 3' and re-ranked the likelihood and consequence, fixed a typo under clearwell hazardous event, added a control measure for clearwell out of service to 'adjust CT calculation for reduced clearwell time' and re-ranked the consequence, removed 'on-line monitoring with alarms' from chlorine cylinder failure, removed 'back up analyzers, shutdown on low residual' and added 'spare parts' to analyzer failure, fixed typo under secondary disinfection pump failure hazardous event, removed 'duplexed analyzer' and added 'free chlorine analyzer available for CT' under secondary disinfection analyzer failure, added 'post soda ash feed pump failure' hazardous event, added 'loss of residual in the distribution system' as a hazardous event, added 'pump failure alarm' and re-ranked likelihood and consequence under the high lift process step, re-ranked likelihood and consequence under power failure, added 'standby power failure' as a hazardous event, added 'Soda Ash and Polymer Feed' in Table 2 as part of the filtration process CCP, and changed Operations Manager title to Senior Operations Manager and Cluster Manager title to Operations Manager and removed reference to Process Compliance Manager in Table 3. Changed the title of the facility to Chapleau Water Treatment System.
2013-04-29	3	Updated the turbidity and free chlorine CCP set point in Table 2.
2013-06-20	4	Changed title under CCP in Table 2 from 'Chlorine Gas System' to 'Primary Disinfection' and added river depth and temperature changes as a hazardous event for raw water.

# Appendix D

## QEMS Organizational Structure for the Chapleau Water Treatment System



## QEMS Organizational Structure for the Chapleau Water Treatment System




\* Represents the highest level of OCWA's Top Management



# Appendix E

## QP-03 Personnel Coverage

 Ontario Clean Water Agency	<h2>QEMS Procedure</h2>	Proc.: QP-03 Issued: 2013-03-15 Rev.#: 2 Pages: 1 of 2
Reviewed by: Amanda Dubuc, PCT	Approved by: Eric Nielson, Senior Operations Manager	

## PERSONNEL COVERAGE

### 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 the Chapleau Water Treatment System

### 3.0 Responsibility

Senior Operations Manager  
 Operations Manager  
 Overall Responsible Operator

### 4.0 Definitions

*Competency* – an integrated set of requisite skills and knowledge that enables an individual to effectively perform the activities of a given occupation \*

*Essential Services* – services that are necessary to enable the employer to prevent,

- (a) danger to life, health or safety,
- (b) the destruction or serious deterioration of machinery, equipment or premises,
- (c) serious environmental damage, or
- (d) disruption of the administration of the courts or of legislative drafting.

(*Crown Employees Collective Bargaining Act, 1993*)

### 5.0 Procedure

- 5.1 The Senior Operations Manager ensures that personnel meeting the competencies identified in the Operational Plan are available for duties that directly affect drinking water quality.
- 5.2 The Chapleau Water Treatment System is considered manned at the Chapleau WTP. OCWA operations personnel are remotely available 24 hours a day, 7 days a week by alarming systems. The sites are visited by OCWA operations daily between the hours of 07:30 to 16:00.
- 5.3 OCWA personnel are assigned to act as and fulfill the duties of Overall Responsible Operator (ORO) and Operator-in-Charge (OIC) in accordance with SDWA O. Reg. 128/04.

When the ORO is unavailable, the Operations Manager is designated as the ORO and is recorded as such in the facility logbook.

The designated OIC for each shift is recorded in the facility logbook.

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\* Based on the 2005 *National Occupational Guidelines for Canadian Water and Wastewater Operators* and International Board of Standards for Training, Performance and Instruction

- 5.4 The Operations Manager and/or designate assigns an on-call operator for the time that the facility is un-staffed (i.e.: evenings, weekends and Statutory Holidays). The on-call shift rotates every Tuesday morning at 07:30. The on-call schedule is maintained by the Operations Manager or designee and available to all on-call operators in the Microsoft Outlook Shared Calendar.
- 5.5 The on-call operator is responsible for responding to the alarm monitoring service within a reasonable time frame. Details of the call-ins are maintained electronically in WMS.
- 5.6 The alarm system auto dialer is programmed to contact the operator on-call. The operator on-call is responsible for responding to the alarm within a reasonable timeframe. If the nature of the alarm requires additional staff, the on-call operator can request assistance from any of the other certified operators. The on-call operator records details of the call-in in the facility logbook and on the Call-In Report form.
- 5.7 The Operations Manager and/or designate is responsible for approving vacation time for staff in a manner which ensures sufficient personnel are available for the performance of normal operating duties.
- 5.8 OCWA's Operations staff are represented by the Ontario Public Service Employees Union (OPSEU). In the event of a labour disruption, the Senior Operations Manager, together with the union, identifies "essential services" required to operate the facility so that the quality of drinking water is not compromised in any way.
- 5.9 A contingency plan for Critical Shortage of Staff is included in the Facility Emergency Plan. This plan provides direction to staff in the event that there is a severe shortage of staff due to sickness (e.g., pandemic flu) or other unusual situations where personnel might not be available.

## 6.0 Related Documents

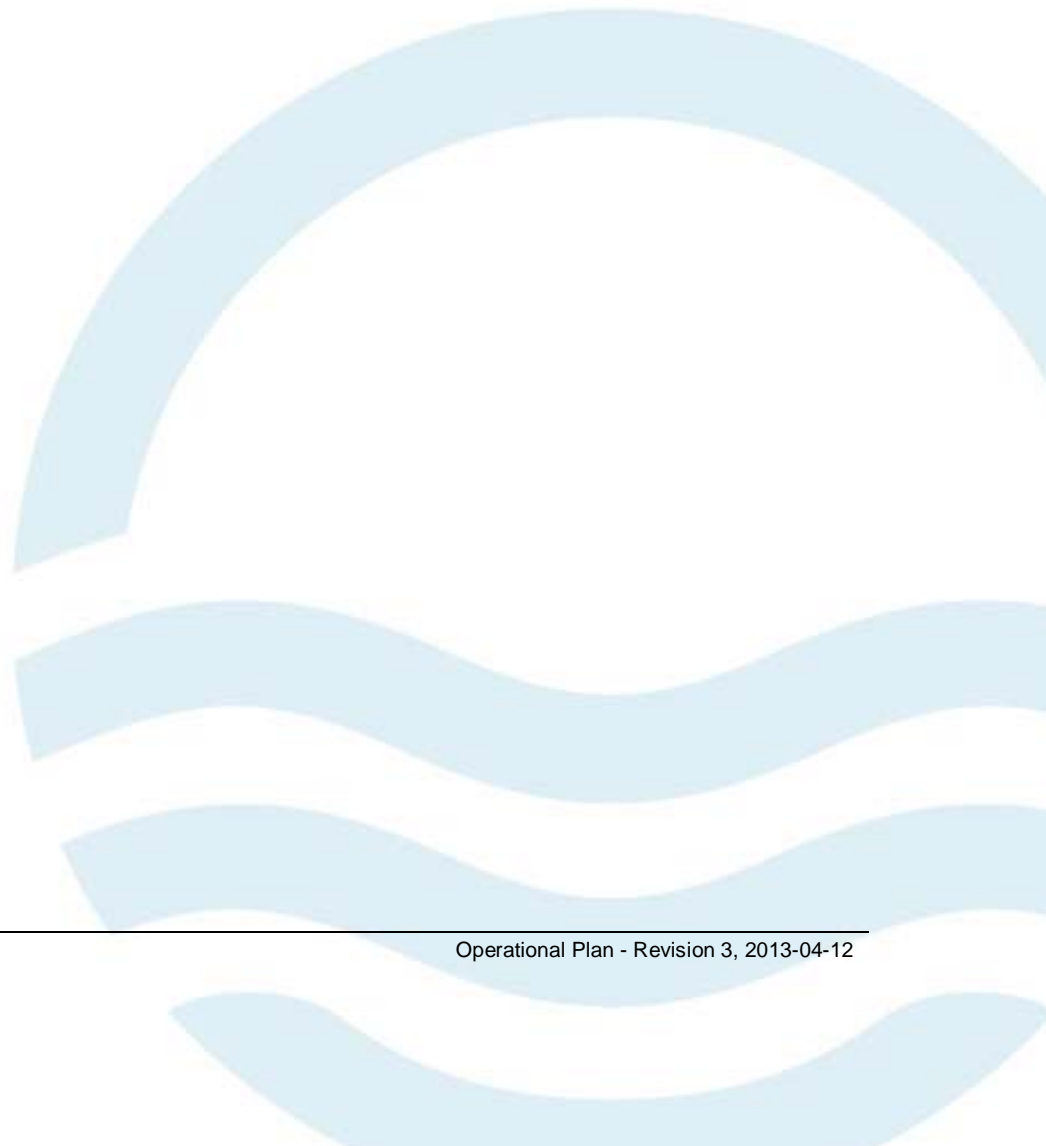
QP-01 Document and Records Control  
Call-In Reports  
Critical Shortage of Staff Contingency Plan (Facility Emergency Plan)  
Facility Logbook  
Facility Round Sheets  
On-Call Schedule  
Vacation Schedule


## 7.0 Revision History

Date	Revision	Reason for Revision
2010-02-01	0	Procedure issued
2012-01-11	1	Procedure 5.9 was added to reference contingency planning for Critical Shortage of Staff
2013-03-15	2	Change title of plan to 'Chapleau Water Treatment System'. Revised position titles; Operations Manager has been changed to Senior Operations Manager, Cluster Manager has been changed to Operations Manager, and Process Compliance Manager has been removed as the position was discontinued.

# Appendix F

## QP-04 Communications



 Ontario Clean Water Agency	<h2>QEMS Procedure</h2>	Proc.: QP-04 Issued: 2013-04-12 Rev.#: 3 Pages: 1 of 3
Reviewed by: Amanda Dubuc, PCT	Approved by: Eric Nielson, Senior Operations Manager	

## COMMUNICATIONS

### 1.0 Purpose

To describe the procedures for QEMS-related communications between the facility's Top Management and OCWA personnel, the owner, suppliers and the public

### 2.0 Scope

Applies to facility level internal and external communications regarding the Quality & Environmental Management System (QEMS) implemented at the Chapleau Water Treatment System.

### 3.0 Responsibility

Senior Operations Manager (Facility Level Top Management)  
 Operations Manager (Facility Level Top Management)  
 Overall Responsible Operator  
 Process & Compliance Technician (PCT)  
 Regional Manager (Corporate Level Top Management)

### 4.0 Definitions

None

### 5.0 Procedure

5.1 The Senior Operations Manager and PCT are responsible for identifying and coordinating any site-specific communications in relation to the status/development of the facility's QEMS. They are also responsible for ensuring that the Regional Manager is promptly informed regarding QEMS-related matters with Agency-wide significance.

5.2 Upon hire, OCWA personnel are scheduled to attend the Environmental Compliance course which provides general awareness training on OCWA's QEMS.

The Senior Operations Manager, PCT and/or Operations Manager ensures facility personnel receive site-specific training on the Operational Plan, QEMS Procedures and other related operating instructions and procedures as part of the orientation process.

Revisions to the QEMS and associated documentation are communicated to relevant employees at meetings, through internal memos or e-mails on an as-needed basis. The Operational Plan and procedures are available to all facility employees and the public as per Table 1 of QP-01 Document and Records Control.

The QEMS Policy and an overview of the QEMS are available to all OCWA personnel through OCWA's intranet. The QEMS Policy is publicly accessible on OCWA's internet website.

5.3 The continuing suitability, adequacy and effectiveness of OCWA's QEMS are communicated to the owner as part of the Management Review process (refer to

QEMS Procedure QP-11 Management Review). Ongoing QEMS updates are provided to the owner during scheduled meetings and through electronic and verbal communications.

- 5.4 Communication requirements for ensuring suppliers and contractors understand the relevant OCWA QEMS policies, procedures and expectations are described in QEMS Procedure QP-05 Essential Supplies and Services.
- 5.5 Media enquiries must be directed to the facility's designated media spokesperson. The Senior Operations Manager and/or Operations Manager is the media spokesperson for the Chapleau Water Treatment System. The media spokesperson coordinates with facility and corporate personnel (as appropriate) and the Owner in responding to media enquiries.
- 5.6 OCWA's QEMS and QEMS Policy are communicated to the public through OCWA's public website. The QEMS Policy is also posted at the Chapleau WTP.

Facility tours of interested parties must be approved in advance by the Operations Manager or designate. A record of any tour is made in the facility logbook.

All complaints, whether received from the consumer, the community or other interested parties, are documented in the OPEX database. As appropriate, the Operations Manager or Senior Operator ensures that the Owner is informed of the complaint and/or an action plan is developed to address the issue in a timely manner. Complaints will be included for discussion at the Management Review.

- 5.7 Internal and external communication responsibilities and reporting requirements for emergency situations are set out under OCWA's Emergency Management Program (i.e., Facility Emergency Plan and OCWA's Emergency Response Plan). Refer to QEMS Procedure QP-09 Emergency Management.

## 6.0 Related Documents

QP-01 Document and Records Control  
 QP-05 Essential Supplies and Services  
 QP-09 Emergency Management  
 QP-11 Management Review  
 Community Complaint Form  
 Emergency Response Plan  
 Facility Emergency Plan  
 Facility Logbook  
 OPEX Incident Reports

## 7.0 Revision History

Date	Revision	Reason for Revision
2010-02-01	0	Procedure issued
2012-01-11	1	Correction of some employee titles and update to Procedure 5.2 to include information how revisions are communicated
2013-03-15	2	Change title of plan to 'Chapleau Water Treatment System'. Revised position titles; Operations Manager has been changed to Senior Operations Manager, Cluster Manager has been changed to Operations Manager, and Process Compliance Manager has been removed as the position was discontinued.

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<b>Date</b>	<b>Revision</b>	<b>Reason for Revision</b>
2013-04-12	3	Addressed non-conformance report 2013-01 to include a second publicly accessible location for the operational plan. This change was made in procedure 5.2.



# Appendix G

## QP-05 Essential Supplies and Services



 Ontario Clean Water Agency	<h2>QEMS Procedure</h2>	Proc.: QP-05 Issued: 2013-06-20 Rev.#: 3 Pages: 1 of 2
Reviewed by: Amanda Dubuc, PCT	Approved by: Eric Nielson, Senior Operations Manager	

## ESSENTIAL SUPPLIES and SERVICES

### 1.0 Purpose

To describe OCWA's procedures for procurement and for ensuring the quality of essential supplies and services.

### 2.0 Scope

Applies to essential supplies and services pertaining to the Chapleau Water Treatment System, as identified in this procedure.

### 3.0 Responsibility

Corporate Procurement and Administration  
 Senior Operations Manager  
 Operations Manager  
 Overall Responsible Operator  
 Process & Compliance Technician (PCT)

### 4.0 Definitions

*Essential Supplies and Services* – supplies and services deemed to be critical to the delivery of safe drinking water

### 5.0 Procedure

- 5.1 Essential supplies and services for the Chapleau Water Treatment System are listed in the Contact List Section of the Facility Emergency Plan binder. The list is reviewed and updated as required by the PCT or designate.
- 5.2 Purchasing is conducted in accordance with OCWA's Corporate Procurement and Administration policies, procedures and guidelines, which are adopted from those of the Ontario Public Service.  
  
Purchases of capital equipment are subject to formal approval by the facility's owner.
- 5.3 As part of the Corporate procurement process, potential suppliers/service providers are informed of relevant aspects of OCWA's QEMS through the tendering process and through specific terms and conditions set out in our agreements and purchase orders. Essential suppliers/service providers (including those contracted locally) are sent a letter that provides an overview of the relevant aspects of the QEMS.
- 5.4 Contractors are selected based on their qualifications and ability to meet the facility's needs without compromising operational performance and compliance with applicable legislation and regulations.  
  
Contracted personnel including suppliers may be requested or required to participate in additional relevant training/orientation activities to ensure conformance with facility procedures and to become familiar with OCWA workplaces.

If necessary, appropriate control measures are implemented while contracted work is being carried out and communicated to all relevant parties to minimize the risk to the integrity of the drinking water system and the environment.

- 5.5 All third-party drinking water testing services are provided by accredited and licensed laboratories.
- 5.6 Calibration services are provided by qualified personnel.
- 5.7 Chemicals purchased for use in the drinking water treatment process must meet AWWA Standards and be ANSI/NSF certified.  
  
The facility orders and receives ongoing deliveries of chemicals to satisfy current short-term needs based on processing volumes and storage capacities.
- 5.8 Process components/equipment provided by the supplier must meet applicable regulatory requirements and industry standards for use in drinking water systems prior to their installation.
- 5.9 All supplies purchased, once received, are inspected and/or verified to ensure that an acceptable product is received.

## 6.0 Related Documents

QP-01 Document and Records Control  
Essential Supplies and Services List

## 7.0 Revision History

Date	Revision	Reason for Revision
2010-02-01	0	Procedure issued
2012-01-11	1	Addition of Procedure 5.3 clarifying how suppliers are informed of relevant aspects of OCWA's QEMS
2013-03-15	2	Change title of plan to 'Chapeau Water Treatment System'. Revised position titles; Operations Manager has been changed to Senior Operations Manager, Cluster Manager has been changed to Operations Manager, and Process Compliance Manager has been removed as the position was discontinued.
2013-06-20	3	Added statement to ensure that received product and services are verified upon receipt and prior to use, see procedure 5.3.

# Appendix H

## QP-06 Review and Provision of Infrastructure



## QEMS Procedure

Proc.: QP-06  
Issued: 2013-03-15  
Rev.#: 2  
Pages: 1 of 1

Reviewed by: Amanda Dubuc, PCT

Approved by: Eric Nielson, Senior Operations Manager

### REVIEW and PROVISION of INFRASTRUCTURE

#### 1.0 Purpose

To describe OCWA's procedure for reviewing the adequacy of infrastructure necessary to operate and maintain a drinking water system

#### 2.0 Scope

Applies to the Chapeau Water Treatment System

#### 3.0 Responsibility

Senior Operations Manager  
Operations Manager  
Owner/Municipal 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, software and supporting services, such as transport or communication

#### 5.0 Procedure

- 5.1 On an annual basis, the Senior Operations Manager and/or designate conducts a review of the drinking water system's infrastructure to assess its adequacy for the operation and maintenance of the system.
- 5.2 The output of the review is a letter, summarizing capital works recommendations and estimated expenditures, is submitted to the owner for review and comment. Together with the owner, timelines and responsibilities for implementation of priority items are determined and documented.
- 5.3 The Senior Operations Manager, Operations Manager or designate ensures that results of the review are included as input to the Management Review process.

#### 6.0 Related Documents


QP-01 Document and Records Control  
Letter of Capital Works Recommendations  
Minutes of Management Review

#### 7.0 Revision History

Date	Revision	Reason for Revision
2010-02-01	0	Procedure issued
2012-01-11	1	Revised to include the position of Process Compliance Manager
2013-03-15	2	Change title of plan to 'Chapeau Water Treatment System'. Revised position titles; Operations Manager has been changed to Senior Operations Manager, Cluster Manager has been changed to Operations Manager, and Process Compliance Manager has been removed as the position was discontinued.

# Appendix I

## QP-07 Sampling, Testing and Monitoring

 Ontario Clean Water Agency	<h2>QEMS Procedure</h2>	Proc.: QP-07 Issued: 2013-06-20 Rev.#: 3 Pages: 1 of 3
Reviewed by: Amanda Dubuc, PCT	Approved by: Eric Nielson, Senior Operations Manager	

## SAMPLING, TESTING and MONITORING

### 1.0 Purpose

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

### 2.0 Scope

Applies to sampling, testing and monitoring at the Chapeau Water Treatment System

### 3.0 Responsibility

Senior Operations Manager  
 Operations Manager  
 Process & Compliance Technician (PCT)  
 Overall Responsible Operator  
 Operators

### 4.0 Definitions

*Challenging Conditions* – any existing characteristic of the water source or event-driven fluctuations that impact the operational process as identified and listed under the Drinking Water System section in the facility's Operational Plan

### 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 the Environmental Emergency Procedures (EEP) pertaining to adverse results and can be found in the Facility Emergency Plan Binder.

5.2 Samples are submitted to an accredited and licensed laboratory according to the facility's sampling schedule. The sampling schedule is maintained by the PCT and is updated as required.

All analytical results from laboratory reports are entered/uploaded into PDC. Hardcopy reports are maintained as per QP-01 Document and Records Control.

5.3 Continuous monitoring equipment is used to collect and record information on the following parameters related to process control and finished drinking water quality:

Chapeau WTP

- Discharge pressure – treated/distribution water (point of entry)
- Flow rates – raw and treated water
- Free Chlorine Residual – treated water
- Level – clearwells and reservoirs
- Total Chlorine Residual – treated/distribution water (point of entry)
- Turbidity – filter 1 and 2

Data from continuous monitoring equipment is captured by OCWA's SCADA system and are stored electronically on the INSQL server. Results are reviewed by a certified operator in accordance with the requirements of SDWA O. Reg. 170/03. A Standard Operating Procedure for the Continuous Monitoring of Operational Parameters for Drinking Water Systems is available in the Facility Emergency Plan Binder.

- 5.4 In-house process control activities are conducted on a regular basis by the certified operator(s) on duty and are as follows:

Operational Parameter	Location	Frequency
Alkalinity	Raw water Treated water	Grab daily*
Aluminum Residual	Treated water	Grab weekly
Aluminum Sulphate Usage	Chemical room	Reading daily
Chlorine Gas	Chemical room	Reading daily
Colour	Raw water Treated water	Grab weekly
Free, Combined and Total Chlorine Residual	Treated water Distribution water (various locations)	Grab daily*
pH	Raw water Treated water	Grab daily*
Polymer	Chemical room	Reading daily
Soda Ash Usage (Pre and Post)	Chemical room	Reading daily
Temperature	Raw water Treated water	Grab daily*
Turbidity	Raw water Treated water	Grab daily*

\*Grab daily = Monday to Friday

In-house samples are analyzed following approved laboratory procedures. The results of these activities are recorded on a round sheet and are entered into PDC. Any adjustments made to process parameters are recorded in the facility log book.

- 5.5 Additional sampling, testing and monitoring activities related to the facility's most challenging conditions are captured within the existing in-house program described above. As well, any other sampling requested by the system owner would be conducted.
- 5.6 There are no required upstream sampling, testing and monitoring activities that take place for this facility/system.
- 5.7 Sampling, testing and monitoring results are readily accessible to the owner at the Municipal Office and/or the Chapleau Water Treatment Plant.

As a minimum, owners are provided with an annual summary of sampling, testing and monitoring results through the SDWA O. Reg. 170/03 section 11 and schedule 22 reports and through the Management Review process outlined in QP-11 Management Review.

In addition, updates regarding sampling, testing and monitoring activities are provided as per the operating agreement and during regular client meetings.

## 6.0 Related Documents

QP-01 Document and Records Control  
QP-11 Management Review  
Annual Report  
Continuous Monitoring of Operational Parameters for Drinking Water Systems SOP (FEP Binder)  
Facility Emergency Plan (FEP) Binder  
Facility Logbook  
Laboratory Analysis Reports  
Laboratory Chain of Custody Forms  
Municipal Summary Report  
Reporting and Responding to Adverse Results (FEP Binder)  
Round Sheets  
Sampling Schedule

## 7.0 Revision History

Date	Revision	Reason for Revision
2010-02-01	0	Procedure issued
2012-01-11	1	Addition of Process and Compliance Manager (3.0 Responsibility) and clarification of sampling under 5.0 Procedure
2013-03-15	2	Change title of plan to 'Chapleau Water Treatment System'. Revised position titles; Operations Manager has been changed to Senior Operations Manager, Cluster Manager has been changed to Senior Operations Manager, and Process Compliance Manager has been removed as the position was discontinued.
2013-06-20	3	Added detail that additional sampling would be conducted when requested by owner.



# Appendix J

## QP-08 Measurement and Recording Equipment Calibration and Maintenance



Ontario Clean Water Agency

## QEMS Procedure

Proc.: QP-08  
Issued: 2013-03-15  
Rev.#: 2  
Pages: 1 of 2

Reviewed by: Amanda Dubuc, PCT

Approved by: Eric Nielson, Senior Operations Manager

### **MEASUREMENT and RECORDING EQUIPMENT CALIBRATION and MAINTENANCE**

#### **1.0 Purpose**

To describe the procedure for the calibration and maintenance of measurement and recording equipment

#### **2.0 Scope**

Applies to the measurement and recording equipment at the Chapleau Water Treatment System

#### **3.0 Responsibility**

Senior Operations Manager  
Process & Compliance Technician (PCT)  
Overall Responsible Operator  
Instrumentation Technicians

#### **4.0 Definitions**

None

#### **5.0 Procedure**

- 5.1 All measurement and recording equipment calibration and maintenance activities must be performed by appropriately trained and qualified personnel or by a qualified third-party calibration service provider (refer to QP-05 Essential Supplies and Services).
- 5.2 The Instrumentation Technician or designate establishes and maintains a list of measurement and recording devices and associated calibration schedules using the automated Work Management System (WMS).
- 5.3 Calibration and maintenance activities are carried out in accordance with procedures specified in the manufacturer's manual, instructions specified in WMS.
- 5.4 Any measurement device which does not meet its specified performance requirements during calibration must be removed from service (if practical) until repaired or replaced. The failure must be reported to the Senior Operations Manager, Operations Manager or designate as soon as possible so that immediate measures can be taken to ensure that drinking water quality has not been compromised by the malfunctioning device. Any actions taken as a result of the failure are recorded in the facility logbook. Any notifications required by applicable legislation are completed and documented within the specified time period.
- 5.5 Calibration and maintenance records and maintenance/equipment manuals are maintained as per QP-01 Document and Records Control.

#### **6.0 Related Documents**

QP-01 Document and Records Control

QP-05 Essential Supplies and Services  
Calibration/Maintenance Records  
Facility Logbook  
WMS Records


## 7.0 Revision History

<b>Date</b>	<b>Revision</b>	<b>Reason for Revision</b>
2010-02-01	0	Procedure issued
2012-01-11	1	Revised to include proper title for Process Compliance Manager
2013-03-15	2	Change title of plan to 'Chapleau Water Treatment System'. Revised position titles; Operations Manager has been changed to Senior Operations Manager, Cluster Manager has been changed to Operations Manager, and Process Compliance Manager has been removed as the position was discontinued.



# Appendix K

## QP-09 Emergency Management

 Ontario Clean Water Agency	<h2>QEMS Procedure</h2>	Proc.: QP-09 Issued: 2013-03-15 Rev.#: 3 Pages: 1 of 2
Reviewed by: Amanda Dubuc, PCT	Approved by: Eric Nielson, Senior Operations Manager	

## EMERGENCY MANAGEMENT

### 1.0 Purpose

To describe the procedure for maintaining a state of emergency preparedness at the facility level under OCWA's Emergency Management Program.

### 2.0 Scope

Applies to potential operations emergency situations or service interruptions identified for the Chapleau Water Treatment System.

### 3.0 Responsibility

Corporate Compliance Group  
 Senior Operations Manager  
 Operations Manager  
 Overall Responsible Operator  
 Process & Compliance Technician (PCT)

### 4.0 Definitions

*Facility Emergency Plan* – a facility level plan for preparedness for operations emergencies that can be managed by plant staff and local resources

*Emergency Response Plan* – a corporate level plan for preparedness for serious operations emergencies

### 5.0 Procedure

5.1 The Corporate Compliance Group maintains the corporate level Emergency Response Plan and the OCWA template for establishing a plan for facility level emergencies (the "Facility Emergency Plan" template). The Senior Operations Manager (or designate) ensures that a site-specific Facility Emergency Plan is established and kept up-to-date for each facility in the Hub.

5.2 OCWA has established a list of mandatory contingencies for potential emergency situations or service interruptions. These are:

- Potential or actual unsafe water
- Catastrophic equipment failure that impacts the ability to provide service
- Power failure that impacts the ability to provide service
- Accidental release that could impact the environment
- Critical injury
- Critical shortage of staff
- Forest fire

The Senior Operations Manager or designate ensures that a site-specific contingency plan defining the processes for response and recovery is in place for each of the mandatory contingencies (as applicable) and that additional contingency plans to address site-specific risks and hazards are identified and developed.

Mandatory and site-specific contingencies for the Chapleau Water Treatment System are contained within the Facility Emergency Plan and are referred to as Environmental Emergency Procedures.

- 5.3 Each contingency plan must be reviewed at a minimum annually and at least one plan must be tested each year. Training on the Facility Emergency Plan is provided on an ongoing basis.
- 5.4 Roles and responsibilities for emergency management at OCWA operated facilities are set out in the Facility Emergency Plan under the “Roles and Responsibilities” section. Specific roles and responsibilities related to a particular emergency situation or service interruption, including those of the owner where necessary, are set out in the relevant contingency plan.
- 5.5 Relevant sections of the Municipal Emergency Plan, which may also contain additional information on emergency roles and responsibilities, are contained in the “Appendices” section of the Facility Emergency Plan and are incorporated into contingency plans when appropriate.
- 5.6 An emergency contact list is contained and an Essential Suppliers and Services within the Facility Emergency Plan and is reviewed and/or updated at least annually. Protocols for communication during emergency situations or service interruptions are set out in the individual contingency plans and in OCWA’s Emergency Response Plan.

## 6.0 Related Documents


QP-01 Document and Records Control  
Emergency Contact List  
Emergency Response Plan  
Essential Suppliers and Services List  
Facility Emergency Plan  
Municipal Emergency Plan

## 7.0 Revision History

Date	Revision	Reason for Revision
2010-02-01	0	Procedure issued
2012-01-11	1	Corrected Process Compliance Manager’s title
2012-11-13	2	Revised position titles; Operations Manager has been changed to Senior Operations Manager, Cluster Manager has been changed to Operations Manager, and Process Compliance Manager has been removed as the position was discontinued. Added forest fire contingency.
2013-03-15	3	Change title of plan to ‘Chapleau Water Treatment System’.

# Appendix L

## QP-10 Internal QEMS Audits

 Ontario Clean Water Agency	<h2>QEMS Procedure</h2>	Proc.: QP-10 Issued: 2013-03-15 Rev.#: 2 Pages: 1 of 2
Reviewed by: Amanda Dubuc, PCT	Approved by: Eric Nielson, Senior Operations Manager	

## INTERNAL QEMS AUDITS

### 1.0 Purpose

To describe the procedure for conducting internal audits at the facility level that evaluate the conformance of OCWA's Quality & Environmental Management System (QEMS) to the requirements of the Drinking Water Quality Management Standard (DWQMS).

### 2.0 Scope

Applies to all activities within the scope of the QEMS implemented at the Chapleau Water Treatment System as documented in the Operational Plan

Note: this procedure does not include the facility's internal compliance audits conducted in accordance with OCWA's Internal Audit Program.

### 3.0 Responsibility

Senior Operations Manager  
 Operations Manager  
 Overall Responsible Operator  
 Corporate Compliance Group  
 Process & Compliance Technician (PCT)

### 4.0 Definitions

*Internal QEMS Audit* – a systematic and documented internal verification process that involves objectively obtaining and evaluating documents and processes to determine whether a quality management system conforms to the requirements of the DWQMS

*Internal Auditor* – person with skills, training and/or experience to conduct an internal audit

*Nonconformity* – non-fulfillment of a requirement

### 5.0 Procedure

- 5.1 The Senior Operations Manager ensures that an internal QEMS audit is conducted for the facility at least once every 12 months by personnel with adequate skills, training and/or experience.
- 5.2 In consultation with the PCTs and/or OCWA's Corporate Compliance Group establishes the audit criteria and develops the internal audit protocol to be used by the facility's auditor(s). Protocol questions are designed to encompass all of the requirements of the DWQMS. Additional information is included in the protocol to provide clarification on the purpose and application of the requirement. The protocol is reviewed annually and updated as necessary with guidance from the Corporate Compliance Group.
- 5.3 The auditor(s) reviews the facility's approved policies and procedures, the results of previous internal and external QEMS audits, the status of corrective and preventive actions and other QEMS-related documentation prior to the audit.



- 5.4 The auditor(s) follows the audit protocol and engages in activities that may include asking questions, observing operations and reviewing documents and records. Non-conformities with reference to specific documents and details are recorded on the audit protocol along with any additional comments and suggestions.
- 5.5 Upon completion of the final audit report, the auditor(s) reviews the results and identified nonconformities with the Senior Operations Manager Operations Manager or designate. The audit report and supporting documentation are filed by the QEMS Representative and retained as per QP-01 Document and Records Control.
- 5.6 When nonconformity is identified through the internal audit process, an action plan to rectify the issue is developed by the auditor, specifying responsibility and a target date for resolution. The Senior Operations Manager or designate monitors progress of the action plan related to the identified nonconformity until it is fully resolved.
- The QEMS Representative ensures that any necessary revisions to QEMS procedures and policies are completed and communicated to relevant facility personnel.
- 5.7 The QEMS Representative ensures that results of the audit are included as input to the management review process.

## 6.0 Related Documents

QP-01 Document and Records Control

Action Plans

Audit Reports


Internal Audit Protocol

## 7.0 Revision History

Date	Revision	Reason for Revision
2010-02-01	0	Procedure issued
2012-01-11	1	Clarification of time frames in Procedure 5.1; corrected Process Compliance Manager's title; updated the development of audit protocol in Procedure 5.2
2013-03-15	2	Change title of plan to 'Chapeau Water Treatment System'. Revised position titles; Operations Manager has been changed to Senior Operations Manager, Cluster Manager has been changed to Operations Manager, and Process Compliance Manager has been removed as the position was discontinued.

# Appendix M

## QP-11 Management Review

 Ontario Clean Water Agency	<h2>QEMS Procedure</h2>	Proc.: QP-11 Issued: 2013-03-15 Rev.#: 2 Pages: 1 of 2
Reviewed by: Amanda Dubuc, PCT	Approved by: Eric Nielson, Senior Operations Manager	

## MANAGEMENT REVIEW

### 1.0 Purpose

To describe the procedure for conducting a Management Review of the Quality & Environmental Management System (QEMS) at the facility level.

### 2.0 Scope

Applies to the review of the QEMS implemented at the Chapleau Water Treatment System.

### 3.0 Responsibility

Facility Level Top Management:

- Senior Operations Manager
- Operations Manager

Other Management Review Participants:

- Process & Compliance Technician (PCT)
- Overall Responsible Operator (as required)
- Operators (as required)
- Regional Compliance Advisor (as required)
- Corporate Compliance Advisor (as required)
- Regional Manager (as required)

### 4.0 Definitions

*Management Review* – a formal (documented) meeting conducted at least once every 12 months by Top Management to evaluate the continuing suitability, adequacy and effectiveness of OCWA's Quality & Environmental Management System (QEMS)

### 5.0 Procedure

5.1 The Senior Operations Manager 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.

Management Reviews for more than one drinking water system may be conducted at the same meeting provided the systems belong to the same owner and the considerations listed in section 5.2 below are taken into account for each individual system and documented in the Management Review meeting minutes.

5.2 The standing agenda for Management Review meetings is as follows:

- a) Incidents of regulatory non-compliance,
- b) Incidents of adverse drinking water tests,
- c) Deviations from critical control limits and response actions,
- d) The efficacy of the risk assessment process,
- e) Internal and third-party audit results,
- f) Results of emergency response testing,
- g) Operational performance,

- h) Raw water supply and drinking water quality trends,
- i) Follow-up on action items from previous Management Reviews,
- j) The status of management action items identified between reviews,
- k) Changes that could affect the QEMS,
- l) Consumer feedback,
- m) The resources needed to maintain the QEMS,
- n) The results of the infrastructure review,
- o) Operational Plan currency, content and updates, and
- p) Staff suggestions.

The QEMS Representative coordinates the Management Review and distributes the agenda with identified responsibilities to participants in advance of the Management Review meeting along with any related reference materials.

- 5.3 The Management Review participants review the data presented and make recommendations and/or initiate action plans to address identified deficiencies as appropriate.
- 5.4 The QEMS Representative ensures that minutes of and action plans resulting from the Management Review meeting are prepared and distributed to the appropriate OCWA management (including the Regional Manager) and personnel and the municipality.
- 5.5 The Senior Operations Manager or designate monitors the progress and documents the completion of action plans resulting from the Management Review.

## 6.0 Related Documents

QP-01 Document and Records Control

Minutes and action plans resulting from the Management Review

## 7.0 Revision History

Date	Revision	Reason for Revision
2010-02-01	0	Procedure issued
2012-01-11	1	Corrected Process Compliance Manager's title
2013-03-15	2	Change title of plan to 'Chapleau Water Treatment System'. Revised position titles; Operations Manager has been changed to Senior Operations Manager, Cluster Manager has been changed to Operations Manager, and Process Compliance Manager has been removed as the position was discontinued.

# Appendix N

## Subject System Description Form (Schedule C)

## Schedule “C”

Subject System Description Form			
Municipal Residential Drinking-Water System			
Owner of Municipal Residential Drinking-Water System: <sup>1</sup>		The Corporation of the Township of Chapleau	
Name of Municipal Residential Drinking-Water System: <sup>2</sup>		Chapleau Drinking Water System	
Subject Systems			
	Name of Operational Subsystems (if applicable)	Name of Operating Authority	DWS Number(s)
<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>			
Operational Subsystem 1:	Treatment System	Ontario Clean Water Agency	220003494
Operational Subsystem 2:	Distribution System	Corporation of the Township of Chapleau	220003494
Contact Information			
Name	Title	Phone No(s).	Email Address
Primary: Amanda Dubuc	Process & Compliance Technician	Office: (705) 672-5549 Cell: (705) 648-4267	<a href="mailto:adubuc@ocwa.com">adubuc@ocwa.com</a>
Alternate: Brian Jibb	Operations Manager	Office: (705) 567-3955 Cell: (705) 642-5341	<a href="mailto:bjibb@ocwa.com">bjibb@ocwa.com</a>
Alternate: Chad Byce	Senior Operator/Mechanic	Office: (705) 864-0105 Cell: (705) 864-4434	<a href="mailto:cbyce@ocwa.com">cbyce@ocwa.com</a>

## Subject System Description Form Notes:

1. The legal name of the owner should be used for this entry.
2. The name of the municipal residential drinking-water system should be the name most commonly used to describe the entire system. If information or records have been submitted to the ministry respecting this system, using an identifier name (e.g. for DWS), that identifier name should be used.
3. The identification of each operational subsystem will be necessary in cases where the municipal residential drinking-water system is being operated by more than one operating authority. For example, if a municipality owns a treatment and distribution system but contracts the operation of the treatment system to a separate entity there will be two 'operational subsystems', treatment and distribution. The name used to identify these operational subsystems should be one that is commonly used or describes the component. For example, the Everytown Treatment System and the Everytown Distribution System as separate operational subsystems of the same municipal residential drinking-water system.
4. If there is only one operating authority for the municipal residential drinking-water system, the box should be checked as such. In this case the subject system is the municipal residential drinking-water system and there will be no operational subsystem. The operating authority will need to be identified in the adjacent box.
5. The legal or corporate name of the operating authority should be used for this entry.
6. The DWS number is the number, or numbers, assigned to the drinking-water system by the Ministry of the Environment in response to the owner submitting a written notice containing information about the system further to section 10.1 of O. Reg. 170/03. In some cases multiple DWS numbers may exist for components of a municipal residential drinking-water system. In these cases enter all DWS numbers. Conversely, if one DWS number exists for multiple subject systems, enter the number opposite each operational subsystem.
7. The contact entry should identify a person who may be contacted for clarification of information contained in the form. An alternate person may also be identified.