

**DWQMS Element-Based Checklist**  
**Hand-out from the Session “Preparing for and Conducting a Transition Audit”**  
**2019 Provincial Workshop – Drinking Water Quality Management Standard (DWQMS)**

<b>DWQMS 2.0 (Condition Expected)</b>	<b>Auditor Comments (Condition Found)</b>
<p><b>1. Quality Management System (QMS)</b>  <b>PLAN</b> – The OP shall <i>document a QMS</i> that <i>meets the requirements</i> of this Standard.  <b>DO</b> – The OA shall <i>establish and maintain the QMS</i> in accordance with the requirements of this Standard and the <i>policies and procedures</i> documented in the OP.</p>	
<p><b>2. QMS Policy</b>  <b>PLAN</b> – The OP shall <i>document a QMS Policy</i> that provides the foundation for the QMS, and:  a) includes a <i>commitment</i> to the <i>maintenance and continual improvement of the QMS</i>,  b) includes a commitment to the <i>Consumer to provide safe drinking water</i>,  c) includes a commitment to <i>comply with applicable legislation and regulations</i>, and  d) is in a form that <i>can be communicated</i> to all OA <i>personnel</i>, the <i>Owner</i> and the <i>Public</i>.  <b>DO</b> – The OA shall <i>establish and maintain a QMS</i> that is consistent with the QMS Policy.</p>	
<p><b>3. Commitment and Endorsement</b>  <b>PLAN</b> – The OP shall contain a <i>written endorsement</i> of its contents by <i>Top Management</i> and the <i>Owner</i>.  <b>DO</b> – Top Management shall provide <i>evidence</i> of its <i>commitment</i> to an effective QMS by:  a) ensuring that a <i>QMS is in place that meets</i> the requirements of this Standard,  b) <i>ensuring</i> that the OA is aware of all applicable <i>legislative and regulatory requirements</i>,  c) <i>communicating</i> the <i>QMS</i> according to the procedure for communications,  d) <i>determining, obtaining or providing</i> the <i>resources needed</i> to maintain and continually improve the QMS.</p>	

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<p><b>4. QMS Representative</b>  <b>PLAN</b> – The OP shall <i>identify</i> a <b>QMS representative</b>.  <b>DO</b> – Top Management shall <b>appoint and authorize</b> a QMS representative who, irrespective of other responsibilities, shall:</p> <ul style="list-style-type: none"> <li>a) <b>administer</b> the QMS by <b>ensuring that processes and procedures needed</b> for the QMS are <b>established and maintained</b>,</li> <li>b) <b>report to Top Management</b> on the <b>performance</b> of the QMS and any need for <b>improvement</b>,</li> <li>c) ensure that <b>current versions of documents</b> required by the QMS are being <b>used at all times</b>,</li> <li>d) ensure that <b>personnel</b> are <b>aware</b> of all applicable <b>legislative and regulatory requirements</b> that pertain to their duties for the operation of the Subject System, and</li> <li>e) promote <b>awareness of the QMS</b> throughout the OA.</li> </ul>	
<p><b>5. Document and Records Control</b>  <b>PLAN</b> – The OP shall document a procedure for Document and Records control that describes how:</p> <ul style="list-style-type: none"> <li>a) <b>Documents required</b> by QMS are: <ul style="list-style-type: none"> <li>i. kept <b>current, legible</b> and readily <b>identifiable</b></li> <li>ii. <b>retrievable</b></li> <li>iii. <b>stored, protected, retained and disposed of</b>, and</li> </ul> </li> <li>b) <b>Records required</b> by the QMS are: <ul style="list-style-type: none"> <li>i. kept <b>legible</b>, and readily <b>identifiable</b></li> <li>ii. <b>retrievable</b></li> <li>iii. <b>stored, protected, retained and disposed of</b>.</li> </ul> </li> </ul> <p><b>DO</b> – The OA shall implement and conform to the procedure for Document and Records control and shall ensure that QMS documentation for the Subject System includes:</p> <ul style="list-style-type: none"> <li>a) the <b>OP</b> and its associated <b>policies and procedures</b>,</li> <li>b) Documents and Records determined by the OA as <b>being needed</b> to ensure the effective <b>planning, operation and control</b> of its operations, and</li> <li>c) the results of <b>internal and external Audits</b> and <b>management reviews</b>.</li> </ul>	

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<p><b>6. Drinking Water System (DWS)</b></p> <p><b>PLAN</b> – The OP shall <b>document</b>, as applicable:</p> <p>a) for the Subject System:</p> <p>i. the name of the <b>Owner</b> and <b>OA</b>,</p> <p>ii. if the system includes equipment that provides <b>Primary Disinfection</b> and/or <b>Secondary Disinfection</b>:</p> <p>A. a <b>description of the system</b> including all applicable <b>Treatment System processes</b> and <b>Distribution System components</b>,</p> <p>B. a Treatment System <b>process flow chart</b>,</p> <p>C. a description of the <b>water source</b>, including:</p> <p>I. general <b>characteristics of the raw water</b> supply,</p> <p>II. <b>common event-driven fluctuations</b>, and</p> <p>III. any resulting <b>operational challenges and threats</b>.</p> <p>iii. if the system does not include equipment that provides Primary Disinfection or Secondary Disinfection:</p> <p>A. a description of the system including all Distribution System components, and</p> <p>B. a description of any <b>procedures</b> that are in place to <b>maintain disinfection residuals</b>.</p> <p>b) if the Subject System is an Operational Subsystem, a summary <b>description</b> of the <b>Municipal Residential Drinking Water System it is a part of</b> including the name of the <b>OA(OA's)</b> for the other Operational Subsystems.</p> <p>c) if the Subject System is <b>connected to one or more</b> other Drinking Water Systems owned by different <b>Owners</b>, a summary description of those systems which:</p> <p>i. indicates whether the Subject System <b>obtains water from or supplies water to</b> those systems,</p> <p>ii. names the <b>Owner</b> and <b>OA(OA's)</b> of those systems, and</p> <p>iii. identifies which, if any, of those systems that the Subject System <b>obtains</b> water from are relied upon to <b>ensure the provision of safe drinking water</b>.</p> <p><b>DO</b> – The OA shall ensure that the <b>description</b> of the Drinking Water System is <b>kept current</b>.</p>	

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<p><b>7. Risk Assessment</b></p> <p><b>PLAN</b> – The OP shall document a risk assessment process that:</p> <ul style="list-style-type: none"> <li>a) Considers potential hazardous events and associated hazards, as identified in MOECC document titled <b>Potential Hazardous Events for Municipal Residential Drinking Water Systems</b>, dated February 2017 as it may be amended. A copy of this document is available at <a href="http://www.ontario.ca/drinkingwater">www.ontario.ca/drinkingwater</a>.</li> <li>b) ID's <b>additional potential</b> hazardous events &amp; associated hazards,</li> <li>c) <b>assesses</b> the <b>risks</b> assoc. w/ the <b>occurrence</b> of hazardous events,</li> <li>d) <b>ranks</b> the hazardous events according to the <b>associated risk</b>,</li> <li>e) <b>identifies control measures</b> to address the potential hazards and hazardous events,</li> <li>f) identifies <b>Critical Control Points</b>,</li> <li>g) identifies a method to <b>verify, at least once every calendar year</b>, the <b>currency</b> of the information and the <b>validity of the assumptions</b> used in the risk assessment,</li> <li>h) ensures that the risks are <b>assessed at least once every thirty-six months</b>, and</li> <li>i) considers the <b>reliability and redundancy of equipment</b>.</li> </ul> <p><b>DO</b> – The OA shall <b>perform</b> a risk assessment <b>consistent with the documented</b> process.</p>	

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<p><b>8. Risk Assessment Outcomes</b>  <b>PLAN</b> – The OP shall document:</p> <ul style="list-style-type: none"> <li>a) the <b>identified potential hazardous events and associated hazards</b>,</li> <li>b) the <b>assessed risks associated with the occurrence</b> of hazardous events,</li> <li>c) the <b>ranked</b> hazardous events,</li> <li>d) the <b>identified control measures</b> to address the potential hazards and hazardous events,</li> <li>e) the identified <b>Critical Control Points</b> and their respective <b>Critical Control Limits</b>,</li> <li>f) procedures and/or processes to <b>monitor the Critical Control Limits</b>,</li> <li>g) procedures to <b>respond to deviations from the Critical Control Limits</b>, and</li> <li>h) procedures for <b>reporting and recording deviations</b> from the Critical Control Limits.</li> </ul> <p><b>DO</b> – The OA shall <b>implement and conform</b> to the procedures.</p>	
<p><b>9. Org. Structure, Roles, Responsibilities and Authorities</b>  <b>PLAN</b> – The OP shall:</p> <ul style="list-style-type: none"> <li>a) describe the <b>organizational structure</b> of the OA including <b>respective roles, responsibilities and authorities</b>,</li> <li>b) delineate <b>corporate oversight</b> roles, responsibilities, authorities in the case where the OA operates multiple Subject Systems,</li> <li>c) identify the <b>person, persons or group of people</b> within the management structure of the org. responsible for undertaking the <b>Management Review</b> described in Element 20,</li> <li>d) identify the person, persons or group of people, having <b>Top Management responsibilities</b> required by this Standard, along with their responsibilities, &amp;</li> <li>e) identify the <b>Owner</b> of the Subject System.</li> </ul> <p><b>DO</b> – The OA shall <b>keep current</b> the description of the organizational structure including respective roles, responsibilities and authorities, and shall <b>communicate</b> this information to OA <b>personnel</b> and the <b>Owner</b>.</p>	

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<p><b>10. Competencies</b>  <b>PLAN</b> – The OP shall <b>document</b>:</p> <ul style="list-style-type: none"> <li>a) <b>competencies</b> required for personnel performing duties directly <b>affecting drinking water quality</b>,</li> <li>b) activities to <b>develop and/or maintain competencies</b> for personnel performing duties directly affecting drinking water quality, and</li> <li>c) activities to ensure that personnel are <b>aware of the relevance of their duties</b> and <b>how they affect</b> safe drinking water.</li> </ul> <p><b>DO</b> – The OA shall undertake <b>activities</b> to:</p> <ul style="list-style-type: none"> <li>a) <b>meet and maintain competencies</b> for personnel directly affecting drinking water quality and shall <b>maintain records</b> of these activities, and</li> <li>b) <b>ensure that personnel are aware</b> of the relevance of their duties and how they affect safe drinking water and shall <b>maintain records</b> of these activities.</li> </ul>	
<p><b>11. Personnel Coverage</b>  <b>PLAN</b> – The OP shall document a procedure to ensure that <b>sufficient personnel meeting identified competencies</b> are available for duties that <b>directly affect</b> drinking water quality.  <b>DO</b> – The OA shall <b>implement and conform</b> to the procedure.</p>	
<p><b>12. Communications</b>  <b>PLAN</b> – The OP shall document a <b>procedure</b> for communications that describes <b>how the relevant aspects of the QMS</b> are <b>communicated</b> between Top Management and:</p> <ul style="list-style-type: none"> <li>a) the <b>Owner</b>,</li> <li>b) OA <b>personnel</b>,</li> <li>c) <b>Suppliers</b> that have been identified as essential under <b>Plan (a) of Element 13 of this Standard</b>, and</li> <li>d) the <b>Public</b>.</li> </ul> <p><b>DO</b> – The OA shall <b>implement and conform</b> to the procedure.</p>	

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<p><b>13. Essential Supplies and Services</b>  <b>PLAN</b> – The OP shall:  a) identify all <b>supplies and services essential</b> for the delivery of <b>safe drinking water</b> and shall state, for each supply or service, the <b>means to ensure its procurement</b>,</p> <p>and</p> <p>b) include a procedure by which the OA <b>ensures the quality</b> of essential supplies and services, in as much as they may affect drinking water quality.</p> <p><b>DO</b> – The OA shall implement and conform to the procedure.</p>	
<p><b>14. Review and Provision of Infrastructure</b>  <b>PLAN</b> – The OP shall document a procedure for <b>reviewing the adequacy of the infrastructure necessary</b> to operate and maintain the Subject System that:  a) <b>Considers the outcomes of the risk assessment</b> documented under Element 8, and  b) <b>Ensures that the adequacy of the infrastructure necessary</b> to operate and maintain the Subject System is reviewed <b>at least once every Calendar Year</b>.</p> <p><b>DO</b> – The OA shall <b>implement and conform</b> to the procedure and <b>communicate the findings</b> of the review to the <b>Owner</b>.</p>	

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<p><b>15. Infrastructure Maintenance, Rehabilitation and Renewal</b></p> <p><b>PLAN</b> – The OP shall document:</p> <p>a) a <b>summary</b> of the OA's <b>infrastructure maintenance, rehabilitation and renewal programs</b> for the Subject System, and</p> <p>b) <b>a long term forecast of major infrastructure maintenance, rehabilitation and renewal activities.</b></p> <p><b>DO</b> – The OA shall:</p> <p>a) <b>keep the summary</b> of the infrastructure maintenance, rehabilitation and renewal programs <b>current</b>,</p> <p>b) ensure that the <b>long term forecast</b> is <b>reviewed at least once every Calendar Year</b>,</p> <p>c) <b>communicate</b> the programs <b>to the Owner</b>, and</p> <p>d) <b>monitor the effectiveness</b> of the maintenance program.</p>	
<p><b>16. Sampling, Testing and Monitoring</b></p> <p><b>PLAN</b> – The OP shall document:</p> <p>a) a <b>sampling, testing and monitoring procedure</b> for <b>process control and finished drinking water quality</b> including requirements for sampling, testing and monitoring at the <b>conditions most challenging</b> to the Subject System,</p> <p>b) a description of <b>relevant sampling, testing or monitoring</b> activities, if <b>any</b>, that take place <b>upstream</b> of the Subject System, and</p> <p>c) a procedure that describes how sampling, testing and monitoring results are <b>recorded and shared</b> between the <b>OA</b> and the <b>Owner</b>, where applicable.</p> <p><b>DO</b> – The OA shall implement and conform to the procedures.</p>	
<p><b>17. Measurement and Recording Equipment Calibration and Maintenance</b></p> <p><b>PLAN</b> – The OP shall document a <b>procedure</b> for the <b>calibration and maintenance</b> of <b>measurement and recording</b> equipment.</p> <p><b>DO</b> – The OA shall <b>implement and conform</b> to the procedure.</p>	



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<p><b>18. Emergency Management</b></p> <p><b>PLAN</b> – The OP shall document a <b>procedure to maintain a state of emergency preparedness</b> that includes:</p> <ul style="list-style-type: none"> <li>a) a <b>list of potential emergency situations</b> or service interruptions,</li> <li>b) <b>processes</b> for emergency <b>response and recovery</b>,</li> <li>c) emergency response <b>training and testing</b> requirements,</li> <li>d) <b>Owner and OA responsibilities</b> during emergency situations,</li> <li>e) <b>references to municipal</b> emergency planning measures as appropriate, and</li> <li>f) an <b>emergency communication protocol</b> and an <b>up-to-date list</b> of emergency <b>contacts</b>.</li> </ul> <p><b>DO</b> – The OA shall <b>implement and conform</b> to the procedure.</p>	
<p><b>19. Internal Audits</b></p> <p><b>PLAN</b> – The OP shall document a <b>procedure for internal Audits</b> that:</p> <ul style="list-style-type: none"> <li>a) <b>evaluates conformity of the QMS</b> with the requirements of this Standard,</li> <li>b) identifies internal Audit <b>criteria, frequency, scope, methodology and record-keeping</b> requirements,</li> <li>c) considers <b>previous internal and external Audit results</b>, and</li> <li>d) describes <b>how QMS Corrective Actions are identified and initiated</b>.</li> </ul> <p><b>DO</b> – The OA shall <b>implement and conform</b> to the procedure and shall ensure that internal Audits are conducted at <b>least once every Calendar Year</b>.</p>	

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<p><b>20. Management Review</b></p> <p><b>PLAN</b> – The OP shall document a <b>procedure for management review</b> that <b>evaluates</b> the continuing <b>suitability, adequacy and effectiveness</b> of the QMS and that includes consideration of:</p> <ul style="list-style-type: none"> <li>a) incidents of <b>regulatory non-compliance</b>,</li> <li>b) incidents of <b>adverse drinking water tests</b>,</li> <li>c) <b>deviations from Critical Control Point limits and response actions</b>,</li> <li>d) the <b>effectiveness of the risk assessment</b> process,</li> <li>e) <b>internal and third-party Audit</b> results,</li> <li>f) <b>results of emergency response testing</b>,</li> <li>g) <b>operational performance</b>,</li> <li>h) <b>raw water supply and drinking water quality trends</b>,</li> <li>i) follow-up on <b>action items</b> from <b>previous management reviews</b>,</li> <li>j) the <b>status</b> of management <b>action items</b> identified between reviews,</li> <li>k) <b>changes that could affect</b> the QMS,</li> <li>l) <b>Consumer feedback</b>,</li> <li>m) the <b>resources needed</b> to maintain the QMS,</li> <li>n) the <b>results of the infrastructure review</b>,</li> <li>o) <b>OP currency, content and updates</b>, and</li> <li>p) <b>staff suggestions</b>.</li> </ul> <p><b>DO</b> – Top Management shall <b>implement and conform</b> to the procedure and shall:</p> <ul style="list-style-type: none"> <li>a) ensure that a management review is conducted <b>at least once every Calendar Year</b>,</li> <li>b) consider the <b>results of the management review</b> and identify <b>deficiencies and actions</b> items to address the <b>deficiencies</b>,</li> <li>c) provide a <b>record of any decisions and action items</b> related to the management review including the <b>personnel responsible</b> for delivering the action items and the <b>proposed timelines</b> for their implementation, and</li> <li>d) <b>report</b> the <b>results of the management review, the identified deficiencies, decisions and action items to the Owner</b>.</li> </ul>	

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<p><b>21. Continual Improvement</b></p> <p><b>PLAN</b> – The OA shall develop a <b>procedure</b> for <b>tracking and measuring continual improvement</b> of its QMS by:</p> <p>a) <b>reviewing and considering</b> applicable <b>best management practices</b>, including any published by the Ministry of the Environment and Climate Change and available on <a href="http://www.ontario.ca/drinkingwater">www.ontario.ca/drinkingwater</a>, at least once every thirty-six months;</p> <p>b) documenting a process for <b>identification and management</b> of QMS <b>Corrective Actions</b> that includes:</p> <ol style="list-style-type: none"> <li>i. <b>investigating the cause(s)</b> of an identified non-conformity,</li> <li>ii. <b>documenting the action(s) that will be taken</b> to correct the non-conformity and prevent the non-conformity from re-occurring, and</li> <li>iii. <b>reviewing the action(s) taken</b> to correct the non-conformity, <b>verifying that they are implemented and are effective in correcting and preventing</b> the re-occurrence of the non-conformity.</li> </ol> <p>c) documenting a process for identifying and implementing <b>Preventive Actions</b> to eliminate the occurrence of potential non-conformities in the QMS that includes:</p> <ol style="list-style-type: none"> <li>i. <b>reviewing potential non-conformities</b> that are identified to determine if preventive actions may be necessary,</li> <li>ii. <b>documenting the outcome of the review</b>, including the action(s), if any, that will be taken to prevent a non-conformity from occurring, and</li> <li>iii. <b>reviewing the action(s) taken to prevent</b> a non-conformity, <b>verifying that they are implemented and are effective</b> in preventing the occurrence of the non-conformity.</li> </ol> <p><b>DO</b> – The OA shall <b>strive to continually improve the effectiveness of its QMS</b> by implementing and conforming to the procedure.</p>	