

July 13, 2022

Municipality of Leamington
111 Erie St. North
Leamington, ON N8H 2Z9

File: SI-ES-LE-540

Attention: Mr. Peter Neufeld, CAO

Re: Leamington (Wheatley) Distribution System Inspection Report

Please find enclosed the Inspection Report for the inspection of the Leamington (Wheatley) Distribution System (DWS#260087048) June 21, 2022.

The format of the enclosed report has been updated, and you will note that the non-compliance and/or non-conformance items are now detailed at the beginning of the report. All questions that were assessed are included in the Inspection Details Section.

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles of the Inspection, Investigation & Enforcement (II&E) Secretariat and advice of internal/external risk experts. The Inspection Rating Report (IRR) provides the Ministry, the system owner and the local Public Health Units with a summarized quantitative measure of the drinking water system's annual inspection and regulated water quality testing performance. IRR ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspectors' Annual Report.

Please note that due to a change in IT systems, the Inspection Rating Report (IRR) cannot be generated at the same time as the inspection report. The IRR will be sent separately and prior to any public release (typically within 1-2 month of the completion of the inspection).

If you have any questions or concerns regarding this report, please call me at (226) 280-1406.

Yours truly,



Emily Awad
Water Inspector, Provincial Officer #1823
Drinking Water and Environmental Compliance Division
Sarnia/Windsor District

Encl.

cc: Nelson Carvalho, Supervisor, Water Services, Municipality of Leamington;
Scott Sparling, Manager of Compliance and Quality Standards, Chatham-Kent PUC;
Nicole Dupuis, Chief Executive Officer; Kristy McBeth, Director of Health Protection; Victoria Peczulis, Manager,
Environmental Health, WECHU;
Marc Bechard, Supervisor, Ministry of the Environment, Conservation and Parks.



LEAMINGTON DISTRIBUTION SYSTEM (WHEATLEY DS)

Inspection Report

System Number: 260087048

Entity: CHATHAM-KENT PUBLIC
UTILITIES COMMISSION
CORPORATION OF THE
MUNICIPALITY OF LEAMINGTON

Inspection Start Date: 06/21/2022

Inspection End Date:

Inspected By: Emily Awad

Badge #: 1823



(signature)

NON-COMPLIANCE/NON-CONFORMANCE ITEMS

This should not be construed as a confirmation of full compliance with all potential applicable legal requirement and BMPs. These inspection findings are limited to the components and/or activities that were assessed, and the legislative framework(s) that were applied. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

If you have any questions related to this inspection, please contact the signed Provincial Officer.

INSPECTION DETAILS

This section includes all questions that were assessed during the inspection.

Ministry Program: DRINKING WATER | **Regulated Activity:**

Question ID	MRDW1001001	Question Type	Information
Question:			
What was the scope of this inspection?			
Legislative Requirement	Not Applicable		
Observation			
<p>The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management practices.</p> <p>This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.</p> <p>This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.</p> <p>The Leamington (Wheatley) Distribution System (DWS#260087048) is owned by the Corporation of the Municipality of Leamington. It is a stand alone connected distribution system (DS) that receives treated water from a separately owned donor system, the Chatham-Kent Drinking Water System - Wheatley (DWS#220003332). There is a water supply agreement (as per O. Reg. 170/03, s.5(4)) between the Chatham-Kent Public Utility Commission (PUC) and the Municipality of Leamington which authorizes the Chatham-Kent PUC to conduct sampling in the Leamington (Wheatley) DS. Leamington's Water Services Department is responsible for all other aspects of the operation, including maintenance and repair, of the water distribution system.</p> <p>This focused inspection was conducted on June 21, 2022 for the inspection period June 1, 2021 to May 31, 2022.</p>			

Question ID	MRDW1000001	Question Type	Information
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Question: Does this drinking water system provide primary disinfection?	
Legislative Requirement	Not Applicable
Observation	
This Drinking Water System provides for only secondary disinfection and distribution of water. Primary disinfection is undertaken by another regulated Drinking Water System which provides treated water to this Drinking Water System.	

Question ID	MRDW1033001	Question Type	Legislative
Question: Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?			
Legislative Requirement	SDWA O. Reg. 170/03 7-2 (3); SDWA O. Reg. 170/03 7-2 (4);		
Observation			
The secondary disinfectant residual was measured as required for the large municipal residential distribution system.			
<p>Under an O.Reg. 170/03 section 5(4) agreement, the donor (Chatham-Kent PUC) must ensure that the receiver's distribution system is sampled as though it were an extension of their own system. As per O.Reg. 170/03 s.7-2(3), the owner/operating authority of a system that provides secondary disinfection (the donor in this case) shall ensure that at least seven distribution samples are taken each week and are tested immediately for (a) free chlorine residual, if the system provides chlorination and does not provide chloramination; or (b) combined chlorine residual, if the system provides chloramination. The following rules apply to the distribution samples referred to above unless at least one sample is taken on each day of the week. A least four of the samples must be taken on one day of the week, at least 48 hours after the last sample was taken in the previous week. Then, at least three of the samples must be taken on a second day of the week, at least 48 hours after the last sample was taken on the first day of the sampling week. When more than one sample is taken on the same day of the week then each sample must be taken from a different location.</p> <p>Failure to maintain target secondary disinfection has been identified in the Operational Plan as a critical control point. The critical control limits are: Trigger Free Chlorine Residual = 0.25 mg/L, Target Free Chlorine Residual = 0.5 mg/L. During the inspection review period (June 1, 2021 to May 31, 2022), the required free chlorine residuals were taken in conjunction with sampling of the Wheatley DWS program. Free chlorine residuals ranged from 0.6 to 1.83 mg/L.</p> <p>At the inspection, the undersigned officer measured the chlorine residual in the lunchroom</p>			

at the Water Services Building. The concentration was 0.92 mg/L free and 1.19 mg/L total.

Question ID	MRDW1099001	Question Type	Information
Question:			
Do records show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03)?			
Legislative Requirement	Not Applicable		
Observation			
Records did not show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03).			
A routine water sample collected from the distribution system (Sample Station # 1 - 2136 Mersea Road #2) on June 14, 2021 had a Total Coliform result of 12 cfu/mL (AWQI#154320). The free chlorine residual was 0.88 mg/L and the total chlorine residual was 1.05 mg/L. A Boil Water Advisory (BWA) was issued by the Windsor-Essex County Health Unit (WECHU) on June 16, 2021. The required corrective actions were completed (flushing and resampling). After receiving satisfactory resample results for samples collected on June 16 and June 17, 2021, the BWA was rescinded by the WECHU on June 19, 2021.			
A Total Coliform count of 1 cfu/mL was reported at this same sample station the year before (June 15, 2020). During this inspection, the undersigned officer tested the free chlorine residual at this sample station and it was 1.18 mg/L. The operator indicated that this station has an autoflusher upstream which had been recently tested.			

Question ID	MRDW1081001	Question Type	Legislative
Question:			
For LMR systems, are all microbiological water quality monitoring requirements for distribution samples being met?			
Legislative Requirement	SDWA O. Reg. 170/03 10-2 (1); SDWA O. Reg. 170/03 10-2 (2); SDWA O. Reg. 170/03 10-2 (3);		
Observation			
All microbiological water quality monitoring requirements prescribed by legislation for distribution samples in a large municipal residential system were being met.			
Under an O. Reg. 170/03 section 5(4) agreement, the donor (Chatham-Kent PUC) must			

ensure that the receiver's distribution system is sampled as though it were an extension of their own system. As per O. Reg. 170/03 s.10-2 , the owner/operating authority (the donor system in this case) shall ensure that if a system serves 100,000 people or less, at least eight distribution samples, plus one additional sample for every 1,000 people served, are taken every month, with at least one sample being taken each week. Each of the distribution samples collected must be tested for E. coli and total coliform and at least 25 percent of these samples must be tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC). For this system, at least 8 monthly samples of E. coli and total coliform, and 2 monthly samples of HPC, are required.

During the inspection review period (June 1, 2021 to May 31, 2022), the Leamington (Wheatley) distribution system portion was sampled 12 to 18 times per month. All of these samples were tested for E. coli, total coliforms and HPC.

Question ID	MRDW1096001	Question Type	Legislative
Question:			
Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?			
Legislative Requirement	SDWA O. Reg. 170/03 6-3 (1);		
Observation			
Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.			

Question ID	MRDW1086001	Question Type	Legislative
Question:			
Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?			
Legislative Requirement	SDWA O. Reg. 170/03 13-6.1 (1); SDWA O. Reg. 170/03 13-6.1 (2); SDWA O. Reg. 170/03 13-6.1 (3); SDWA O. Reg. 170/03 13-6.1 (4); SDWA O. Reg. 170/03 13-6.1 (5); SDWA O. Reg. 170/03 13-6.1 (6);		
Observation			
All haloacetic acid water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.			
Under an O.Reg. 170/03 section 5(4) agreement, the donor (Chatham-Kent PUC) must ensure that the receiver's distribution system is sampled as though it were an extension of their own system. As per O.Reg 170/03 s.13-6.1, the owner/operating authority (the donor			

system in this case) shall ensure that a minimum of one sample is collected and tested for haloacetic acid (HAA) per calendar quarter. On January 1, 2020, the O.Reg. 169/03 standard for HAA (80ug/L) came into effect and is expressed as a running annual average (RAA) of quarterly results.

During the inspection review period (June 1, 2021 to May 31, 2022) no samples were collected within the Leamington (Wheatley) DS, however, the Chatham-Kent PUC's sampling program met minimum requirements within the larger connected distribution system. These HAA quarterly samples were collected from the Tilbury Reservoir on Aug. 16, 2021 (28ug/L), Nov. 15, 2021 (22ug/L), Feb. 14, 2022 (17ug/L) and May 2, 2022 (23ug/L). All of these HAA results were below 80ug/L and the RAA was 22.5ug/L.

Question ID	MRDW1087001	Question Type	Legislative
Question: Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?			
Legislative Requirement	SDWA O. Reg. 170/03 13-6 (1); SDWA O. Reg. 170/03 13-6 (2); SDWA O. Reg. 170/03 13-6 (3); SDWA O. Reg. 170/03 13-6 (4); SDWA O. Reg. 170/03 13-6 (5); SDWA O. Reg. 170/03 13-6 (6);		
Observation			
All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.			
Under an O.Reg. 170/03 section 5(4) agreement, the donor (Chatham-Kent PUC) must ensure that the receiver's distribution system is sampled as though it were an extension of their own system. As per O.Reg 170/03 s.13-6, the owner/operating authority (the donor system in this case) shall ensure that a minimum of one sample is collected and tested for trihalomethanes (THM) per calendar quarter.			
During the inspection review period (June 1, 2021 to May 31, 2022) no samples were collected within the Leamington (Wheatley) DS, however, the Chatham-Kent PUC's sampling program met minimum requirements within the larger connected distribution system. These THM quarterly samples were collected from Sample Station #M-1 (Mint Waterline DS) on Aug. 16, 2021 (54.5ug/L), Nov. 15, 2021 (44.2ug/L), Feb. 14, 2022 (24.1 ug/L) and May 2, 2022 (33.7ug/L). All of the THM results were below 100ug/L and the RAA was 39.1ug/L.			

Question ID	MRDW1101001	Question Type	Legislative
Question:			

For LMR Systems, have corrective actions (as per Schedule 17 of O. Reg. 170/03) been taken to address adverse conditions, including any other steps as directed by the Medical Officer of Health?	
Legislative Requirement	SDWA O. Reg. 170/03 17-1; SDWA O. Reg. 170/03 17-10 (1); SDWA O. Reg. 170/03 17-11; SDWA O. Reg. 170/03 17-12; SDWA O. Reg. 170/03 17-13; SDWA O. Reg. 170/03 17-14; SDWA O. Reg. 170/03 17-2; SDWA O. Reg. 170/03 17-3; SDWA O. Reg. 170/03 17-4; SDWA O. Reg. 170/03 17-5; SDWA O. Reg. 170/03 17-6; SDWA O. Reg. 170/03 17-9;
Observation	
Corrective actions (as per Schedule 17), including any other steps that were directed by the Medical Officer of Health, had been taken to address adverse conditions.	

Question ID	MRDW1104000	Question Type	Legislative
Question:			
Were all required verbal notifications of adverse water quality incidents immediately provided as per O. Reg. 170/03 16-6?			
Legislative Requirement	SDWA O. Reg. 170/03 16-6 (1); SDWA O. Reg. 170/03 16-6 (2); SDWA O. Reg. 170/03 16-6 (3); SDWA O. Reg. 170/03 16-6 (3.1); SDWA O. Reg. 170/03 16-6 (3.2); SDWA O. Reg. 170/03 16-6 (4); SDWA O. Reg. 170/03 16-6 (5); SDWA O. Reg. 170/03 16-6 (6);		
Observation			
All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 Sch. 16-6.			

Question ID	MRDW1054001	Question Type	Information
Question:			
For stand alone connected distribution systems, if the receiving system is claiming the exemptions to O. Reg. 170/03 available under subsection 5(4), does the agreement with the donor satisfy the requirements prescribed by subsection 5(4)?			
Legislative Requirement	Not Applicable		
Observation			
The receiving system was claiming exemptions to O. Reg. 170/03 available under subsection 5(4), and the agreement with the donor satisfied the requirements prescribed by subsection 5(4).			

This distribution system receives water continuously from the Chatham-Kent Wheatley DWS. A review of the January 1, 2016 water supply agreement with the Chatham-Kent PUC appears to satisfy the requirements prescribed by O. Reg. 170/03 section 5(4).

Question ID	MRDW1059000	Question Type	Legislative
Question:			
Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?			
Legislative Requirement	SDWA O. Reg. 128/04 28;		
Observation			
The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.			
All operators have access to Leamington's GIS mapping of the distribution system. They also have individual PDFs available that show all water services. Operators can access these maps on the laptops in each vehicle or at the Water Services Building.			

Question ID	MRDW1060000	Question Type	Legislative
Question:			
Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?			
Legislative Requirement	SDWA 31 (1);		
Observation			
The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.			
The operational plan, including all procedures and related documents, is comprehensive and meets the requirements of the MDWL. These documents are reviewed at least once every calendar year, to ensure they are current and relevant.			

Question ID	MRDW1061001	Question Type	Legislative
Question:			
Are logbooks properly maintained and contain the required information?			
Legislative Requirement	SDWA O. Reg. 128/04 27 (1); SDWA O. Reg. 128/04 27 (2); SDWA O. Reg. 128/04 27 (3); SDWA O. Reg.		

	128/04 27 (4); SDWA O. Reg. 128/04 27 (5); SDWA O. Reg. 128/04 27 (6); SDWA O. Reg. 128/04 27 (7);
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Observation

Logbooks were properly maintained and contained the required information.

Question ID	MRDW1062001	Question Type	Legislative
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Question:
Do records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment is being done by a certified operator, water quality analyst, or person who meets the requirements of O. Reg. 170/03 7-5?

Legislative Requirement	SDWA O. Reg. 170/03 7-5;
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Observation

Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.

Question ID	MRDW1071000	Question Type	BMP
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Question:
Has the owner provided security measures to protect components of the drinking water system?

Legislative Requirement	Not Applicable
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Observation

The owner had provided security measures to protect components of the drinking water system.

The two auto-flushers and three sampling stations in this distribution system are all locked.

Question ID	MRDW1073001	Question Type	Legislative
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Question:
Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?

Legislative Requirement	SDWA O. Reg. 128/04 23 (1);
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Observation

The overall responsible operator had been designated for each subsystem.

Question ID	MRDW1074001	Question Type	Legislative
Question: Have operators-in-charge been designated for all subsystems for which comprise the drinking water system?			
Legislative Requirement	SDWA O. Reg. 128/04 25 (1);		
Observation Operators-in-charge had been designated for all subsystems which comprise the drinking water system.			

Question ID	MRDW1075001	Question Type	Legislative
Question: Do all operators possess the required certification?			
Legislative Requirement	SDWA O. Reg. 128/04 22;		
Observation All operators possessed the required certification.			