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**Ministère de l'Environnement,
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August 10, 2021

Mr. Arryn McNichol
Treasurer/Chief Administrative Officer
The Corporation of the Township of Cramahe
1 Ontario Road,
Colborne, ON K0K 1S0

Dear Mr. McNichol,

Re: Compliance Inspection Report for the Colborne Drinking Water System

The enclosed report documents findings of the inspection that was performed at the Colborne Drinking Water System on June 30, 2021.

“Non-Compliances”, are found on page 3 of the report, are linked to incidents of non-compliance with regulatory requirements contained within an Act, a Regulation, or site-specific approvals, licenses, permits, orders, or instructions. Such violations could result in the issuance of mandatory abatement instruments including Orders, tickets, penalties, or referrals to the ministry’s Investigations and Enforcement Branch. Please note that the required actions may contain required dates for completion.

“Recommended Actions”, as Other Inspection Findings are found also on page 3 of the report, convey information that the owner or operating authority should consider implementing in order to advance efforts already in place to address such issues as emergency preparedness, the fulsome availability of information to consumers, and conformance with existing and emerging industry standards. Please note that items which appear as recommended actions do not, in themselves, constitute violations.

“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)”.

Thank you for the assistance afforded to me during the conduct of the compliance assessment.

Should you have any questions regarding the content of the enclosed report please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Miller".

Paul Millar
Water Inspector
(613) 827-2531
Fax: (613) 962-6809
E-mail: paul.millar@ontario.ca

Enclosure (1)

SI NO CR CO ON 540 (2021/22)

c:

Mr. David Macpherson, Manager of Public Works and Environmental Services, The Corporation of the Twsp of Cramahe

Mr. Larry Spyrka, Manager of Water Capital Projects, Lakefront Utilities Services Incorporated (LUSI)

Dr. Natalie Bocking, Medical Officer of Health, Haliburton Kawartha Prince Ridge District Health Unit

Ms. Rhonda Bateman, CAO/Treasurer, Lower Trent Conservation Authority, 714 Murray Street, RR1, Trenton, ON K8V 5P4

Ms. Jacqueline Fuller, Water Supervisor, Ministry of Environment, Conservation & Parks, Peterborough

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Appendix:

A. Stakeholders Appendix



COLBORNE DRINKING WATER SYSTEM
321 PURDY RD, CRAMAHE, ON, K0K 1S0
Inspection Report

System Number:	220000790
Inspection Start Date:	06/30/2021
Inspection End Date:	08/10/2021
Inspected By:	Paul Millar
Badge #:	1130



(signature)

NON-COMPLIANCE/NON-CONFORMANCE ITEMS

The following item(s) have been identified as non-compliance/non-conformance, based on a "No" response captured for a legislative or best management practice (BMP) question (s), respectively.

Question Group: Other Inspection Findings

Question ID	MRDW1115000	
Question	Question Type	Legislative Requirement
In the event that an issue of non-compliance outside the scope of this inspection protocol is identified, a "No" response may be used if further actions are deemed necessary (and approved by the DW Supervisor) to facilitate compliance.	Legislative	Not Applicable
Observation/Corrective Action(s)		
<p>The following instance(s) of non-compliance were also noted during the inspection:</p> <p>On July 15, 2021, it was identified that the well 2 pump motor had failed. Corrective actions taken by the operational staff included activating well #1 (formerly identified as the standby well) and locating/installing another pump motor. However, the Works Owner had recently amended the pre-existing Permit To Take Water (PTTW) #2363-8VMR6M to provide for the use of Well 1A, soon to be interconnected, and removed Well #1 prematurely. The new PTTW #8612-BNENBH, dated April 11, 2020 does not allow for water taking from well #1, and it is understood that during the PTTW renewal application process an administrative oversight occurred that ultimately resulted in well #1 actually being totally edited out of the new control document, and included only well #2 and the new well (1A), yet to be interconnected to the system.</p> <p>Given the circumstances and administrative error, couple with the fact that well #1 was utilized for only a very short period <24hrs and, was operated at a reduced flow rate (~10 L/s), pumping <200 m3 over the event, no further actions are required.</p>		

Question ID	MRDW1116000	
Question	Question Type	Legislative Requirement
Were the inspection questions sufficient to address other identified best practice issues?	BMP	Not Applicable
Observation/Corrective Action(s)		
<p>The following issues were also noted during the inspection:</p> <ol style="list-style-type: none"> 1.) It is recommended that the Works' Owner &/or Operating Authority improve upon existing O/M Manual - PID/PFD to include location of CI2 point of injection, as well as point where primary disinfection is monitored. 2.) It is recommended that the water tower inspection recommendations as provided by Greatario 		

Services be implemented as time & resources permit.

3.) It is recommended that a more comprehensive Emergency Contact List be created and included within the O/M.

4.) It is recommended that the O/M Manual include a "Table of Contents" referencing where the Municipal License, Sch. B, Condition 16.0 - O/M Manual conditions can be located within.

5.) It is recommended that the confined space below the small building located within the water tower compound be inspected and pumped out so as to confirm that there is not a persistent leak occurring from supply lines located here. Also, a sump pump should be fitted in this area to eliminate any accumulations of water.

6.) It is recommended that the Works Owner &/or the Operating Authority formalize the internal efforts in writing taken to substantiate the training and log records from falsification.

INSPECTION DETAILS

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

Ministry Program: Regulated Activity: DRINKING WATER : DW Municipal Residential

Question ID	MRDW1001000	
Question	Question Type	Legislative Requirement
What was the scope of this inspection?	Information	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>On June 30 & July 19, 2021, the undersigned Ministry of the Environment, Conservation & Parks (MECP) Water Inspector visited the Colborne Drinking Water System (DWS) for the purpose of performing a "focused-unannounced" drinking water system inspection. The MECP inspector was accompanied during the conduct of the physical inspection by Mr. Scott Noble (30th) & Mr. Ryan Smith (19th)(Operator/s In Charge-OIC) of Lakefront Utility Services Incorporated (LUSI) identified as the Operating Authority (O/A) for the Colborne DWS for this inspection period. In addition Mr. Larry Spyrka, also of LUSI, is understood to be the Overall Responsible Operator (ORO) and the Manager of Water Capital Projects was in attendance on both dates. It is further understood that Ms. Sarah Whitton is the Compliance Coordinator for LUSI on behalf of the Works Owner.</p> <p>Additionally, it was reported that in addition to the two staff previously identified one other water treatment operator, as well as four (4) Lakefront Utilities distribution operators, are all identified as "Operator/s In Charge" (OIC) when on-call/onsite.</p> <p>It should be noted that as of August 1, 2021, Aquatech Canada Water Services Inc., will be assuming the operating authority (O/A) capacity for the Colborne DWS.</p> <p>The Corporation of the Township of Cramahe is acknowledged to be the owner of the Drinking Water System (DWS). Under Ontario Regulation (O.Reg) 170/03, a large municipal residential system, is a drinking water system that serves more than 100 private residences. A major</p>		

residential development is defined in the Safe Drinking Water Act (SDWA) as a development of six (6) or more private residences on one (1) or more properties. The Colborne DWS serves a population of approximately 2000 persons, and under regulation is considered a Large Municipal Residential System.

The drinking water system inspection included a physical inspection of the treatment plant, both wells, the water tower, as well as a file review of documentation for the time period from August 1, 2020 to May 31, 2021, herein after referred to as the "inspection period" in this report.

Last years inspection report did not cite any Issues of Non-Compliance, nor were any Best Practise Recommendations provided for consideration.

Question ID	MRDW1000000		
Question	Question Type	Legislative Requirement	
Does this drinking water system provide primary disinfection?	Information	Not Applicable	
Observation			
This Drinking Water System provides for both primary and secondary disinfection and distribution of water.			

Question ID	MRDW1007000		
Question	Question Type	Legislative Requirement	
Is the owner maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials?	Legislative	SDWA O. Reg. 170/03 1-2 (1)	
Observation			
The owner was maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials.			
During the physical inspection observations confirmed that the well 1A casing was at least >40 cm in height, with adequate sloping, to include a steel protective casing overtop the portion of the above ground well casing acting as a bolard. Additionally, well 1A was affixed with Well Tag # A002058.			
Wells 1 & 2, were both housed inside pumphouse buildings 1 & 2, respectively, with each building having concrete floors.			
The main production well was reported to be Well 2, as noted within the recently revoked PTTW (#2363-8VMR6M) as well as the facilities DWWP (#138-201).			

Question ID	MRDW1009000		
Question	Question	Legislative	

	Type	Requirement
Are measures in place to protect the groundwater and/or GUDI source in accordance with any MDWL and DWWP issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
Measures were in place to protect the groundwater and/or GUDI source in accordance with any the Municipal Drinking Water Licence and Drinking Water Works Permit issued under Part V of the SDWA.		
Measures to protect the source water have been identified in Municipal License and Permit # 138-101/138-201, as well as Permit's To Take Water #8612-BNENBH. Each of the aforementioned documents prescribes limits as to the water treatment plant's rated capacity &/or the amounts of water that can be taken from either potential well source.		

Question ID	MRDW1014000	Question	Question Type	Legislative Requirement
		Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation				
There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA.				
Municipal License 138-101, Schedule C, section 2.0, states that the Drinking Water System (DWS) shall ensure continuous flow measurement and recording for; 2.1.1) the flow rate and daily volume of treated water that flows from the treatment system conveyed into the treatment sub system to the distribution system and; 2.1.2) the flow rate and daily volume of water that flows into the treatment subsystem.				
The physical inspection revealed two (2) magnetic flow meters capturing flows from the two well sources. The two raw water magnetic flow meters were noted to be manufactured by Siemens (W#2) & ABB (W#1).				

Question ID	MRDW1016000	Question	Question Type	Legislative Requirement
		Is the owner in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation				
The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA.				
A review of the treated water flow data recorded over the inspection period (Aug. 1/20-May 31/21) indicates that there were not any incidences where the flows exceeded the limit of 3283				

M3/day. Flows ranged from 105 - 1239 m3/d. These values equate approximately to 3% - 38%, of the MDWL & PTTW maximum allowable daily takings.

Question ID	MRDW1030000	
Question	Question Type	Legislative Requirement
Is primary disinfection chlorine monitoring being conducted at a location approved by MDWL and/or DWWP issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved?	Legislative	SDWA O. Reg. 170/03 7-2 (1), SDWA O. Reg. 170/03 7-2 (2)
Observation		
Primary disinfection chlorine monitoring was conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved.		
It is acknowledged that primary disinfection is achieved via chlorination coupled with sufficient contact time. Wellhouse #1 includes a US Filter - Wallace & Tiernan free chlorine residual analyzer (equipped with alarms/lock-outs) monitoring the chlorine residuals "after" the contact tank. The contact tank is understood to be 215 m in length by 450 mm in diameter, equating to a volume of 34.2 M3.		

Question ID	MRDW1033000	
Question	Question Type	Legislative Requirement
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?	Legislative	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 distribution system.		
Lakefront Utilities has advised and records support the fact the secondary disinfection is monitored daily, via grab sampling. According to records provided the secondary disinfectant residuals ranged from 0.67 - 1.48 mg/L.		

Question ID	MRDW1037000	
Question	Question Type	Legislative Requirement
Are all continuous monitoring equipment utilized for sampling and testing required by O. Reg.170/03, or MDWL or DWWP or order, equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5 (1)5-10,SDWA

		O. Reg. 170/03 6-5 (1.1)
Observation		
<p>All continuous monitoring equipment utilized for sampling and testing required by O. Reg.170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, were equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6.</p> <p>During the physical inspection of the Colborne DWS it was determined that the only continuous monitoring unit was the US Filter - Wallace & Tiernan free chlorine residual analyzer monitoring the chlorine residual at the point at the end of the contact tank & where primary disinfection has been achieved as per legislation.</p> <p>Documentation provided indicates that critical control limits have been established for this unit with a low limit of 0.45 mg/L and a high limit of 4.0 mg/L.</p>		

Question ID	MRDW1038000	
Question	Question Type	Legislative Requirement
Is continuous monitoring equipment that is being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4
Observation		
<p>Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.</p>		

Question ID	MRDW1035000	
Question	Question Type	Legislative Requirement
Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5 (1)5-10
Observation		
<p>Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.</p> <p>A sporadic review of the logbooks and reports by staff indicate that the SCADA and trended data are reviewed daily and documented as such in the logs.</p>		

Question ID	MRDW1040000	
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Question	Question Type	Legislative Requirement
Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4, SDWA O. Reg. 170/03 6-5 (1)5-10
Observation		
All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.		
Records provided indicate that Nichol Water Services last calibrated the W/T chlorine residual analyzer on June 2/21.		

Question ID	MRDW1018000	
Question	Question Type	Legislative Requirement
Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?	Legislative	SDWA 31 (1)
Observation		
The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.		

Question ID	MRDW1020000	
Question	Question Type	Legislative Requirement
Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 1 documents were prepared in accordance with their Drinking Water Works Permit?	Legislative	SDWA 31 (1)
Observation		
The owner/operating authority was in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period.		
Records provided indicate that one (1) Form #1 - "Record of Watermain Authorized as Future Alterations", was completed over the inspection period, for replacement of a 660 m section of 25 mm watermain on County Road #2 from King Street East to Colton. The Form #1 was dated November 17, 2020, and signed by P.Eng - Kevin Heathcote, as well as Mr. Larry Spyрка of Lakefront Utilities on behalf of the Works' Owner.		
The Municipality is reminded to revise any applicable drawings to reflect these changes to distribution system maps & drawings and retain these records for ten (10) years as per your Drinking Water Works Permit.		

Question ID	MRDW1021000	
Question	Question Type	Legislative Requirement
Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 2 documents were prepared in accordance with their Drinking Water Works Permit?	Legislative	SDWA 31 (1)
Observation		
<p>The owner/operating authority was in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period.</p> <p>A Form 2 - Record of Minor Modification or Replacements to the Drinking Water System was provided for the replacement of Well #2-Pump Motor that failed on July 15/21.</p> <p>Please be advised that a Form 2 - Record of Minor Modification or Replacements to the Drinking Water System is only to be utilized in accordance with Drinking Water Works Permit (DWWP) #138-201, when alterations are considered "pre-approved" as noted within your DWWP. Further these records are required to be retained for a period of ten (10) years.</p>		

Question ID	MRDW1023000	
Question	Question Type	Legislative Requirement
Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued under Part V of the SDWA at all times that water was being supplied to consumers?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation		
<p>Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.</p> <p>A raw water supply which is ground water means water located in subsurface aquifer(s) where the aquifer overburden and soil act as an effective filter that removes micro-organisms and other particles by straining and antagonistic effect, to a level where the water supply may already be potable but disinfection is required as an additional health risk barrier. Where the drinking-water system obtains water from a raw water supply which is ground water, the treatment process must, as a minimum, consist of disinfection and must be credited with achieving an overall performance that provides, at a minimum 2-log (99%) removal or inactivation of viruses before the water is delivered to the first consumer, as is the case for the Colborne Drinking Water System. The treatment system includes a 215 m long (450 mm-dia.) contact pipe, along with chlorination, which together has been credited with 2.0+-log R/I of Viruses, based on Municipal License #138-101, Schedule E, providing that the CT provided shall be greater than or equal to the CT required to achieve the log removal credits assigned.</p>		

Liquid sodium hypochlorite (~12%) is injected immediately upstream of the contact pipe to satisfy primary disinfection, as well as secondary disinfection. CT calculations generated by the undersigned utilizing worst case variables of; max flow rate of 38 L/s, baffle factor of 0.7 for the contact pipe, a low free chlorine residual alarm set point of 0.45 ppm, a max pH of ~7, contact tank volume of 34 m³, and a min temperature of ~11 degrees Celsius, yielded CT achieved value of ~4.7 mg.min/L.

The required CT value, according to the Ministry's-Procedure for Disinfection of Drinking Water in Ontario, indicates that a CT Required value of 3 mg.min/L is necessary.

Please keep in mind that it is highly unlikely that worst case variables like those noted above would all occur at the same time, and as such CT achieved values are expected to be substantially higher. In fact as an example and utilizing the worst case variables extracted from operational data provided for the months of December 2020 and April 2021 yielded CT- Achieved values of ~10.36 mg.min/L & 15.60 mg.min/L, respectively.

Question ID	MRDW1024000	
Question	Question Type	Legislative Requirement
Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation		
Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.		
Secondary chlorine residual values are collected via grab sampling and during routine bacteriological sample collection efforts. According to records the lowest reported secondary disinfectant chlorine residual, occurred on May 18, 2021, yielding a value of 0.67 ppm. The highest reported chlorine residual occurred on Dec. 10, 2020, with a value of 1.48 mg/L.		

Question ID	MRDW1025000	
Question	Question Type	Legislative Requirement
Were all parts of the drinking water system that came in contact with drinking water (added, modified, replaced or extended) disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?	Legislative	SDWA 31 (1)
Observation		
All parts of the drinking water system were disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit.		

Records provided indicate that two (2) events occurred over the inspection period one in August and the other in September both of 2020. In review of the Watermain Break/Repair Reports, dated August 18 & September 17, of 2020, information provided confirms that log records captured, and disinfection provided meets the expectations of the facilities Drinking Water Works Permit, Sch. B, and the Ministry's -2020 - Watermain Disinfection Procedure document.

Question ID	MRDW1062000		
Question	Question Type	Legislative Requirement	
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	SDWA O. Reg. 170/03 7-5	
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.			
The only individual according to records provided with an Operator In Training certification is Ms. S. Whitton, who has been identified as the Compliance Coordinator and not as an operator.			

Question ID	MRDW1060000		
Question	Question Type	Legislative Requirement	
Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?	Legislative	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.			

Question ID	MRDW1071000		
Question	Question Type	Legislative Requirement	
Has the owner provided security measures to protect components of the drinking water system?	BMP	Not Applicable	
Observation			
The owner had provided security measures to protect components of the drinking water system.			
Visual observations made during the field inspection carried out on June 30/21 revealed alarm contacts on doors of both wellhouses, and locks on doors. The water standpipe was perimetered by chain link fencing and a gate equipped with a pad lock and, the small building at this site, revealed that the single door was equipped with a set of alarm contacts.			

Further, it was reported that the facilities are visited 7 days a week for purposes of SCAD review and secondary disinfection testing at which time security is assessed.

Question ID	MRDW1073000		
Question	Question Type	Legislative Requirement	
Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?	Legislative	SDWA O. Reg.	128/04 23 (1)
Observation			
The overall responsible operator has been designated for each subsystem.			
Mr. Spyrka has been identified as the Overall Responsible Operator (ORO) for the water drinking water system over the inspection period.			
The Colborne DWS has been categorized as a Class III - Water Distribution & Supply Subsystem, certificate #3006. Mr. Spyrka is acknowledged to possess a Class III certificate in Water Distribution & Supply Subsystems, certificate #96986, expiry May 31, 2023.			

Question ID	MRDW1074000		
Question	Question Type	Legislative Requirement	
Have operators in charge been designated for all subsystems for which comprise the drinking water system?	Legislative	SDWA O. Reg.	128/04 25 (1)
Observation			
Operators-in-charge had been designated for all subsystems which comprised the drinking water system.			
All staff Lakefront Utilities operational staff are designated as Operator/s-In-Charge (OIC), to include; Mr. Branden Wherry, Mr. Darren Hanbidge, Mr. Nick Cunningham, Mr. Ryan Smith, Mr. Scott Noble, Mr. Scott Prins, Mr. Shawn Bolendar, Mr. Shawn Neilson and Mr. Tim Clarey, with the Compliance Coordinator - Ms. Sarah also available. All parties are appropriately certified to assume the OIC role.			
Please be reminded that Mr. Clarey & Mr. Hanbidge certificates are set to expire in September & December of 2021, respectively.			

Question ID	MRDW1075000		
Question	Question Type	Legislative Requirement	
Do all operators possess the required certification?	Legislative	SDWA O. Reg.	128/04 22
Observation			
All operators possessed the required certification.			

See previous.

Question ID	MRDW1076000		
Question	Question Type	Legislative Requirement	
Do only certified operators make adjustments to the treatment equipment?	Legislative	SDWA O. Reg. 170/03 1-2 (2)	
Observation			
Only certified operators made adjustments to the treatment equipment.			

Question ID	MRDW1099000		
Question	Question Type	Legislative Requirement	
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)?	Information	Not Applicable	
Observation			
Records showed 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).			

Question ID	MRDW1096000		
Question	Question Type	Legislative Requirement	
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	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.			
A sporadic review of Chain of Custody records provided confirms that staff are capturing chlorine residuals at the same time as microbial sampling.			

Question ID	MRDW1081000		
Question	Question Type	Legislative Requirement	
Are all microbiological water quality monitoring requirements for distribution samples being met?	Legislative	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 for distribution samples were being met.		
A review of the bacteriological data received for the inspection period indicates that the operational staff collects three (3) distribution samples per week that are submitted for Total Coliform and E.Coli analyses, with at least 25% submitted for the analyses of Heterotrophic Plate Count (HPC).		

Question ID	MRDW1083000	
Question	Question Type	Legislative Requirement
Are all microbiological water quality monitoring requirements for treated samples being met?	Legislative	SDWA O. Reg. 170/03 10-3
Observation		
All microbiological water quality monitoring requirements for treated samples were being met.		

Question ID	MRDW1084000	
Question	Question Type	Legislative Requirement
Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-2
Observation		
All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.		
Schedule 23 parameters were last collected on Jan. 13, 2020.		
Please be advised that O. Reg. 170/03, Schedule 13 dictates that Schedule 23 parameters shall be gathered at least once every thirty-six (36) months respective to a Large Municipal Residential drinking water system, utilizing a groundwater source for their water supply.		

Question ID	MRDW1085000	
Question	Question Type	Legislative Requirement
Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-4 (1),SDWA O. Reg. 170/03 13-4 (2),SDWA O. Reg. 170/03 13-

	4 (3)
Observation	
<p>All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.</p> <p>Schedule 24 parameters were last collected on Jan. 13, 2020.</p> <p>Please be advised that O. Reg. 170/03, Schedule 13 dictates that Schedule 23 parameters shall be gathered at least once every thirty-six (36) months respective to a Large Municipal Residential drinking water system, utilizing a groundwater source for their water supply.</p>	

Question ID	MRDW1086000		
Question	Question Type	Legislative Requirement	
Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?	Legislative	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			
<p>All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location.</p> <p>Data provided for review indicates that the Colborne DWS last sampled for Haloacetic Acid (HAA) on April 6, 2021, with results of 5.3 ug/L, and prior to this the last three quarters have also yielded the same results as collected from the water tower.</p> <p>The maximum acceptable concentration of HAAs in the distribution system according to O.Reg. 169/03 is 0.08 mg/L or 80 ug/L expressed as a Running Annual Average (RAA).</p>			

Question ID	MRDW1087000		
Question	Question Type	Legislative Requirement	
Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?	Legislative	SDWA O. Reg. 170/03 13-6 (1)	

Observation
All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.
Records indicate that trihalomethane sampling has been carried out as required, quarterly, with the last four sets of results being 3.6 ug/L (Apr.21), 4.1 ug/L (Jan.21), 5.2 ug/L (Oct.20), and 4.5 ug/L (July 20), as taken from the Town's Arena.

Question ID	MRDW1088000		
Question	Question Type	Legislative Requirement	
Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?	Legislative	SDWA O. Reg. 170/03 13-7	
Observation			
All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.			
Records indicate that sampling for Nitrites (NO ₂) and Nitrates (NO ₃) were last conducted on April 6, 2021, from the treated water. Prior to this, samples were collected on Jan of the same year and again in 2020 in October and July. Based on the above sampling, Nitrite results remained steady at 0.003 mg/L, while Nitrate results ranged from 1.55-1.85 mg/L.			

Question ID	MRDW1089000		
Question	Question Type	Legislative Requirement	
Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-8	
Observation			
All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.			
According to records provided for review sampling for Sodium (Na) was last completed on Sept. 16, 2019, from the treated water, yielding a result of 6.87 mg/L.			

Question ID	MRDW1090000		
Question	Question Type	Legislative Requirement	
Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-9	
Observation			
All fluoride water quality monitoring requirements prescribed by legislation were conducted			

within the required frequency.

Sampling for Fluoride was last completed on Sept. 16, 2019, from treated water, yielding a result of 0.09 mg/L.

Question ID	MRDW1100000	
Question	Question Type	Legislative Requirement
Did any reportable adverse/exceedance conditions occur during the inspection period?	Information	Not Applicable
Observation		
There were reportable adverse/exceedances during the inspection period.		
A single adverse situation occurred in June of 2020 regarding a loss of distribution system pressure to a small section of the overall distribution system grid off Hwy #2 near Colton street, resulting in adverse water quality incident (AWQI) report #150355 being filed.		

Question ID	MRDW1101000	
Question	Question Type	Legislative Requirement
Have corrective actions (as per Schedule 17) been taken to address adverse conditions, including any other steps as directed by the Medical Officer of Health?	Legislative	SDWA O. Reg. 170/03 17-1, SDWA O. Reg. 170/03 17-10 (1),SDWA O. Reg. 170/03 17-10 (2),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) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.	
Information obtained indicates that the location where the loss of pressure occurred in June of 2020 was in relation to AWQI #150355, and had been a long standing problem in the area which ultimately resulted in a Boil Water Order (BWO) being issued by the local Health Unit (HKPR) on June 23, 2020. In addition some related infrastructure replacement work was carried out on the supply line to the affected homes in this area.	
A tender was awarded to rectify the situation on October 29, 2020.	
The Boil Water Order was lifted on Feb. 19/21 post commissioning of the new watermain.	

Question ID	MRDW1102000	
Question	Question Type	Legislative Requirement
Have corrective actions (as per Schedule 18) been taken to address adverse conditions, including any other steps as directed by the Medical Officer of Health?	Legislative	SDWA O. Reg. 170/03 18-10 (1),SDWA O. Reg. 170/03 18-11,SDWA O. Reg. 170/03 18-12,SDWA O. Reg. 170/03 18-13,SDWA O. Reg. 170/03 18-14,SDWA O. Reg. 170/03 18-2,SDWA O. Reg. 170/03 18-3,SDWA O. Reg. 170/03 18-4,SDWA O. Reg. 170/03 18-5,SDWA O. Reg. 170/03 18-6,SDWA O. Reg. 170/03 18-9
Observation		
Corrective actions (as per Schedule 18) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.		

The June 2020 - Boil Water Order included direction to ensure that all necessary work be completed to resolve the low pressure situation, as well as the collection of at least two (2) sets of microbiological samples, (24-48 hrs apart) returning potable water results revoking the order.

The BWO is understood to have been lifted Feb. 19, 2021 after the commissioning of the new 25 mm watermain and return of acceptable sampling results, from samples collected on Feb. 9 & 10 of 2021.

Question ID MRDW1104000		
Question	Question Type	Legislative Requirement
Were all required verbal notifications of adverse water quality incidents immediately provided as per O. Reg. 170/03 16-6?	Legislative	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 16-6.		

Question ID MRDW1114000		
Question	Question Type	Legislative Requirement
Does the owner have evidence that, when required, all legal owners associated with the DWS were notified of the requirements of the Licence & Permit?	Legislative	SDWA 31 (1)
Observation		
The owner had evidence that all required notifications to all legal owners associated with the Drinking Water System had been made during the inspection period.		

Question ID MRDW1115000		
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Question	Question Type	Legislative Requirement
In the event that an issue of non-compliance outside the scope of this inspection protocol is identified, a "No" response may be used if further actions are deemed necessary (and approved by the DW Supervisor) to facilitate compliance.	Legislative	Not Applicable
Observation		
<p>The following instance(s) of non-compliance were also noted during the inspection:</p> <p>On July 15, 2021, it was identified that the well 2 pump motor had failed. Corrective actions taken by the operational staff included activating well #1 (formerly identified as the standby well) and locating/installing another pump motor. However, the Works Owner had recently amended the pre-existing Permit To Take Water (PTTW) #2363-8VMR6M to provide for the use of Well 1A, soon to be interconnected, and removed Well #1 prematurely. The new PTTW #8612-BNENBH, dated April 11, 2020 does not allow for water taking from well #1, and it is understood that during the PTTW renewal application process an administrative oversight occurred that ultimately resulted in well #1 actually being totally edited out of the new control document, and included only well #2 and the new well (1A), yet to be interconnected to the system.</p> <p>Given the circumstances and administrative error, couple with the fact that well #1 was utilized for only a very short period <24hrs and, was operated at a reduced flow rate (~10 L/s), pumping <200 m3 over the event, no further actions are required.</p>		

Question ID	MRDW1116000	
Question	Question Type	Legislative Requirement
Were the inspection questions sufficient to address other identified best practice issues?	BMP	Not Applicable
Observation		
<p>The following issues were also noted during the inspection:</p> <ol style="list-style-type: none"> 1.) It is recommended that the Works' Owner &/or Operating Authority improve upon existing O/M Manual - PID/PFD to include location of Cl2 point of injection, as well as point where primary disinfection is monitored. 2.) It is recommended that the water tower inspection recommendations as provided by Greatario Services be implemented as time & resources permit. 3.) It is recommended that a more comprehensive Emergency Contact List be created and included within the O/M. 4.) It is recommended that the O/M Manual include a "Table of Contents" referencing where the Municipal License, Sch. B, Condition 16.0 - O/M Manual conditions can be located within. 5.) It is recommended that the confined space below the small building located within the water 		

tower compound be inspected and pumped out so as to confirm that there is not a persistent leak occurring from supply lines located here. Also, a sump pump should be fitted in this area to eliminate any accumulations of water.

6.) It is recommended that the Works Owner &/or the Operating Authority formalize the internal efforts in writing taken to substantiate the training and log records from falsification.

Question ID	MRDW1117000	
Question	Question Type	Legislative Requirement
Are there any other DWS related items that should be recognized in this report?	Information	Not Applicable
Observation		
The following items are noted as being relevant to the Drinking Water System:		
On August 1, 2021, Aquatech Canada Inc. will be assuming operations for the Colborne DWS as the new Operating Authority.		

Question ID	MRDW1059000	
Question	Question Type	Legislative Requirement
Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?	Legislative	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.		

Question ID	MRDW1061000	
Question	Question Type	Legislative Requirement
Are logbooks properly maintained and contain the required information?	Legislative	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)
Observation		
Logbooks were properly maintained and contained the required information.		



APPENDIX A
STAKEHOLDER APPENDIX

Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment. Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le ministère au 1-866-793-2588, ou encore à waterforms@ontario.ca si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site www.ontario.ca/eaupotable

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Renseignements sur le profil du réseau d'eau potable	012-2149F
Avis de demande de services de laboratoire	012-2148F
Avis de résultats d'analyse insatisfaisants et de règlement des problèmes	012-4444F
Prendre soin de votre eau potable - Un guide destiné aux membres des conseils municipaux	Site Web
Marche à suivre pour désinfecter l'eau potable en Ontario	Site Web
Stratégies pour minimiser les trihalométhanes et les acides haloacétiques de sous-produits de désinfection	Site Web
Filtration Processes Technical Bulletin (en anglais seulement)	Site Web
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	Site Web
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable	Site Web
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	Site Web
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802F
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	Site Web
Liste des personnes-ressources du réseau d'eau potable	Site Web
L'eau potable en Ontario - Norme de gestion de la qualité - Guide de poche	Site Web
Procédure de désinfection des conduites principales	Site Web
Laboratoires autorisés	Site Web

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or waterforms@ontario.ca.

For more information on Ontario's drinking water visit www.ontario.ca/drinkingwater



PUBLICATION TITLE	PUBLICATION NUMBER
FORMS: Drinking Water System Profile Information Laboratory Services Notification Adverse Test Result Notification	012-2149E 012-2148E 012-4444E
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	Website
Procedure for Disinfection of Drinking Water in Ontario	Website
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	Website
Filtration Processes Technical Bulletin	Website
Ultraviolet Disinfection Technical Bulletin	Website
Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments	Website
Certification Guide for Operators and Water Quality Analysts	Website
Guide to Drinking Water Operator Training Requirements	9802E
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	Website
Drinking Water System Contact List	7128E01
Ontario's Drinking Water Quality Management Standard - Pocket Guide	Website
Watermain Disinfection Procedure	Website
List of Licensed Laboratories	Website

APPLICATION OF THE RISK METHODOLOGY USED FOR MEASURING MUNICIPAL RESIDENTIAL DRINKING WATER SYSTEM INSPECTION RESULTS



The Ministry of the Environment (MOE) has a rigorous and comprehensive inspection program for municipal residential drinking water systems (MRDWS). Its objective is to determine the compliance of MRDWS with requirements under the Safe Drinking Water Act and associated regulations. It is the responsibility of the municipal residential drinking water system owner to ensure their drinking water systems are in compliance with all applicable legal requirements.

This document describes the risk rating methodology, which has been applied to the findings of the Ministry's MRDWS inspection

results since fiscal year 2008-09. The primary goals of this assessment are to encourage ongoing improvement of these systems and to establish a way to measure this progress.

MOE reviews the risk rating methodology every three years.

The Ministry's Municipal Residential Drinking Water Inspection Protocol contains 15 inspection modules consisting of approximately 100 regulatory questions. Those protocol questions are also linked to definitive guidance that ministry inspectors use when conducting MRDWS inspections.

ontario.ca/drinkingwater

The questions address a wide range of regulatory issues, from administrative procedures to drinking water quality monitoring. The inspection protocol also contains a number of non-regulatory questions.

A team of drinking water specialists in the ministry assessed each of the inspection protocol regulatory questions to determine the risk (not complying with the regulation) to the delivery of safe drinking water. This assessment was based on established provincial risk assessment principles, with each question receiving a risk rating referred to as the Question Risk Rating. Based on the number of areas where a system is deemed to be non-compliant during the inspection, and the significance of these areas to administrative, environmental, and health consequences, a risk-based inspection rating is calculated by the ministry for each drinking water system.

It is important to be aware that an inspection rating less than 100 per cent does not mean the drinking water from the system is unsafe. It shows areas where a system's operation can improve. The ministry works with owners and operators of systems to make sure they know what they need to do to achieve full compliance.

The inspection rating reflects the inspection results of the specific drinking water system for the reporting year. Since the methodology is applied consistently over a period of years, it serves as a comparative measure both provincially and in relation to the individual system. Both the drinking water system and the public are able to track the performance over time, which encourages continuous improvement and allows systems to identify specific areas requiring attention.

The ministry's annual inspection program is an important aspect of our drinking water safety net. The ministry and its partners share a common commitment to excellence and we continue to work toward the goal of 100 per cent regulatory compliance.

Determining Potential to Compromise the Delivery of Safe Water

The risk management approach used for MRDWS is aligned with the Government of Ontario's Risk Management Framework. Risk management is a systematic approach to identifying potential hazards, understanding the likelihood and consequences of the hazards, and taking steps to reduce their risk if necessary and as appropriate.

The Risk Management Framework provides a formula to be used in the determination of risk:

$$\text{RISK} = \text{LIKELIHOOD} \times \text{CONSEQUENCE}$$

(of the consequence)

Every regulatory question in the inspection protocol possesses a likelihood value (L) for an assigned consequence value (C) as described in **Table 1** and **Table 2**.

TABLE 1:

Likelihood of Consequence Occurring	Likelihood Value
0% - 0.99% (Possible but Highly Unlikely)	L = 0
1 - 10% (Unlikely)	L = 1
11 - 49% (Possible)	L = 2
50 - 89% (Likely)	L = 3
90 - 100% (Almost Certain)	L = 4

TABLE 2:

Consequence	Consequence Value
Medium Administrative Consequence	C = 1
Major Administrative Consequence	C = 2
Minor Environmental Consequence	C = 3
Minor Health Consequence	C = 4
Medium Environmental Consequence	C = 5
Major Environmental Consequence	C = 6
Medium Health Consequence	C = 7
Major Health Consequence	C = 8

The consequence values (0 through 8) are selected to align with other risk-based programs and projects currently under development or in use within the ministry as outlined in **Table 2**.

The Question Risk Rating for each regulatory inspection question is derived from an evaluation of every identified consequence and its corresponding likelihood of occurrence:

- All levels of consequence are evaluated for their potential to occur
- Greatest of all the combinations is selected.

The Question Risk Rating quantifies the risk of non-compliance of each question relative to the others. Questions with higher values are those with a potentially more significant impact on drinking water safety and a higher likelihood of occurrence. The highest possible value would be 32 (4x8) and the lowest would be 0 (0x1).

Table 3 presents a sample question showing the risk rating determination process.

TABLE 3:

Does the Operator in Charge ensure that the equipment and processes are monitored, inspected and evaluated?

Risk = Likelihood × Consequence

C=1	C=2	C=3	C=4	C=5	C=6	C=7	C=8
Medium Administrative Consequence	Major Administrative Consequence	Minor Environmental Consequence	Minor Health Consequence	Medium Environmental Consequence	Major Environmental Consequence	Medium Health Consequence	Major Health Consequence
L=4 (Almost Certain)	L=1 (Unlikely)	L=2 (Possible)	L=3 (Likely)	L=3 (Likely)	L=1 (Unlikely)	L=3 (Likely)	L=2 (Possible)
R=4	R=2	R=6	R=12	R=15	R=6	R=21	R=16

Application of the Methodology to Inspection Results

Based on the results of a MRDWS inspection, an overall inspection risk rating is calculated. During an inspection, inspectors answer the questions related to regulatory compliance and input their “yes”, “no” or “not applicable” responses into the Ministry’s Laboratory and Waterworks Inspection System (LWIS) database. A “no” response indicates non-compliance. The maximum number of regulatory questions asked by an inspector varies by: system (i.e., distribution, stand-alone); type of inspection (i.e., focused, detailed); and source type (i.e., groundwater, surface water).

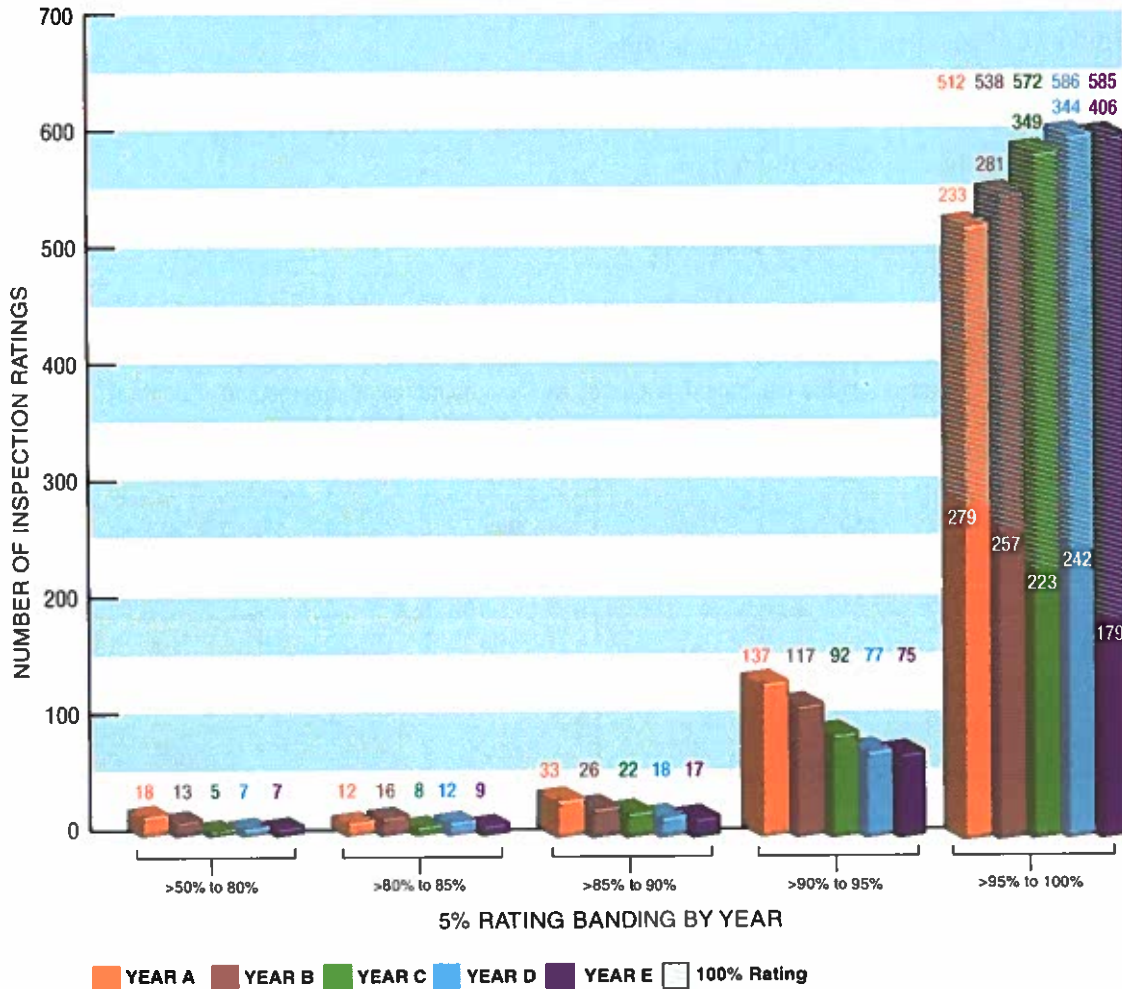
The risk ratings of all non-compliant answers are summed and divided by the sum of the risk ratings of all questions asked (maximum question rating). The resulting inspection risk rating (as a percentage) is subtracted from 100 per cent to arrive at the final inspection rating.

Application of the Methodology for Public Reporting

The individual MRDWS Total Inspection Ratings are published with the ministry's Chief Drinking Water Inspector's Annual Report.

Figure 1 presents the distribution of MRDWS ratings for a sample of annual inspections. Individual drinking water systems can compare against all the other inspected facilities over a period of inspection years.

Figure 1: Year Over Year Distribution of MRDWS Ratings



Reporting Results to MRDWS Owners/Operators

A summary of inspection findings for each system is generated in the form of an Inspection Rating Record (IRR). The findings are grouped into the 15 possible modules of the inspection protocol,

which would provide the system owner/operator with information on the areas where they need to improve. The 15 modules are:

- | | | | |
|-------------------------|---------------------------------|--|--|
| 1. Source | 5. Treatment Process Monitoring | 9. Logbooks | 13. Water Quality Monitoring |
| 2. Permit to Take Water | 6. Process Wastewater | 10. Contingency and Emergency Planning | 14. Reporting, Notification and Corrective Actions |
| 3. Capacity Assessment | 7. Distribution System | 11. Consumer Relations | 15. Other Inspection Findings |
| 4. Treatment Processes | 8. Operations Manuals | 12. Certification and Training | |

For further information, please visit www.ontario.ca/drinkingwater

Ministry of the Environment, Conservation and Parks - Detailed Inspection Rating Record (Reporting Year - 2021-2022)

DWS Name: COLBORNE DRINKING WATER SYSTEM
DWS Number: 220000790
DWS Owner Name: THE CORPORATION OF THE TOWNSHIP OF CRAMAHE
Municipal Location: CRAMAHE

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Jun-30-21
Ministry Office: Peterborough District Office

Non-Compliant Question(s)	Question Rating
Other Inspection Findings	
In the event that an issue of non-compliance outside the scope of this inspection protocol is identified, a "No" response may be used if further actions are deemed necessary (and approved by the DW Supervisor) to facilitate compliance.	0
Overall - Total	0

Maximum Question Rating: 514

Inspection Risk Rating: 0.00%

FINAL INSPECTION RATING: 100.00%

Ministry of the Environment, Conservation and Parks - Inspection Summary Rating Record (Reporting Year - 2021-2022)

DWS Name: COLBORNE DRINKING WATER SYSTEM
DWS Number: 220000790
DWS Owner: THE CORPORATION OF THE TOWNSHIP OF CRAMAHE
Municipal Location: CRAMAHE

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Jun-30-21
Ministry Office: Peterborough District Office

Maximum Risk Rating: 514

Inspection Module	Non Compliance Rating
Source	0 / 14
Capacity Assessment	0 / 30
Treatment Processes	0 / 197
Operations Manuals	0 / 28
Logbooks	0 / 18
Certification and Training	0 / 42
Water Quality Monitoring	0 / 112
Reporting & Corrective Actions	0 / 73
Other Inspection Findings	0 / 0
Overall - Calculated	0 / 514

Inspection Risk Rating: 0.00%

Final Inspection Rating: 100.00%