

Ministry of the Environment,
Conservation and Parks
Drinking Water and Environmental
Compliance Division
West Central Region
Guelph District Office

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Guelph, Ontario N1G 4Y2
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Ministère de l'Environnement de la
Protection de la nature et des Parcs
Division de la conformité en matière
d'eau potable et d'environnement
Direction régionale du Centre-Ouest
Bureau de district de Guelph

1, chemin Stone ouest
4^e étage
Guelph (Ontario) N1G 4Y2
Tél.: 519 826-4256
Télé.: 519 826-4286



February 22, 2023

****Sent via email****

City of Thorold
Public Works Department
1543 Beaverdams Road
Thorold, ON L2V 1N6

Attention: Mr. Steve Santo, Manager of Public Works

Re: Thorold (Decew) Distribution System, DWS#220004313
2022-23 Inspection Report

Dear Mr. Santo,

Please find the enclosed copy of the inspection reports for the Thorold (Decew) Distribution System under the Ministry's focused inspection protocol to assess compliance with Safe Drinking Water legislation.

The items with found within the section entitled "Non-Compliance/Non-Conformance Items" which have sections under legislative requirements, outline non-compliance with regulatory requirements contained within an Act, a Regulation, or site-specific approvals, licenses, permits, orders, or guidelines. Please ensure that the required actions are completed within the prescribed timeframe.

The items with "Not Applicable" legislative requirements provide information to the owner or operating authority outlining practices or standards established through existing and emerging industry standards that should be considered in order to advance current efforts. These items do not, in themselves, constitute violations. More recommendations are also provided within the body of the report.

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 Summary Rating Record (IRR), included as an Appendix of the inspection report, 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 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 months of the completion of the inspection).

Section 19 of the Safe Drinking Water Act (Standard of Care) creates several obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in "Taking Care of Your Drinking Water: A guide for members of municipal council" found under "Resources" on the Drinking Water Ontario website at www.ontario.ca/drinkingwater.

If you wish to discuss the results of the inspection in more detail, please feel free to contact myself or Lisa Williamson, Water Compliance Supervisor, West Central Region at (226)-979-8468.

Yours truly,



Wendy Wingate
Provincial Officer,
Water Inspection Program,
Guelph District Office
Tel: (519) 830-1150

Encl.

cc:

Kory Yungblut, Water/Wastewater Compliance Supervisor, City of Thorold (email)
Colin Horne, Niagara Region Public Health Unit (email)
Jason Wolf, Niagara Region Public Health Unit (email)
Leilani Lee-Yates, Niagara Peninsula Conservation Authority (email)
Thomas Proks, Niagara Peninsula Conservation Authority (email)
Lisa Williamson, Water Compliance Supervisor, West Central Region, MECP (email)
Elizabeth Chee Sing, Water Compliance Supervisor, West Central Region, MECP (email)
MECP, NDO File: SI NI TH A540, 22-23 Thorold (Decew) Distribution System DWS#220004313



THOROLD (DECEW) DISTRIBUTION SYSTEM
3540 SCHMON PKY, THOROLD, ON, L2V 4Y6
Inspection Report

System Number: 220004313

Entity: THE CORPORATION OF THE
CITY OF THOROLD

Inspection Start Date: 01/13/2023

Inspection End Date: 02/08/2023

Inspected By: Wendy Wingate

Badge #: 178



(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	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/Corrective Action(s)			
The secondary disinfectant residual was not measured as required for the large municipal residential distribution system. During the inspection it was noted that the distribution system chlorine residual samples taken on December 30, 2022, were taken less then 48 hours after the chlorine residual samples taken on December 28, 2022. Schedule 7-2 (4) 2 of O. Reg. 170/03 requires that 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 day referred to in paragraph 1. On January 31, 2023, the City of Thorold submitted information to the undersigned Provincial Officer indicating that certified operators received training (January 25, 2023), on sampling during non-routine weeks, DWQMS document A1 - Water Sampling - Chlorine Residuals, and the requirements specified in Schedule 7-2 (4) of O. Reg. 170/03. The city has also committed to providing this training to the operator that was absent (due to extended leave), within two (2) weeks of their return to work, and, submitting confirmation of the training to the undersigned Provincial Officer, within two (2) weeks of the training taking place.			

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 City of Thorold owns and operates the Thorold (Decew) Distribution System which provides drinking water to approximately 14,000 people. The system consists of approximately 88 km of watermains, with approximately 700 isolation valves and 500 fire hydrants located throughout the system. This system is classified as a WD Class 1.</p> <p>The Thorold (Decew) Distribution System is a stand-alone distribution system that receives chlorinated water from the Decew Falls Water Treatment Plant which is owned and operated by the Region of Niagara. A detailed description of the water source for this system can be found in the Decew Falls Water Treatment Plant Municipal Drinking Water License, the Drinking Water Works Permit, and the Decew Falls Water Treatment Plant inspection report.</p> <p>An announced inspection of the Thorold (Decew) Distribution System was conducted on January 13, 2023. The inspection included a compliance assessment with applicable documentation and a review of the maintenance records. The inspection period covered by</p>			

this report is from February 1, 2022, to January 13, 2023.

Municipal Drinking Water Licence (MDWL) #075-101, Issue 3 and Drinking Water Works Permit (DWWP) #075-201, Issue 5 dated September 24, 2020, were valid during the inspection period.

This inspection report has been reviewed and approved by Lisa Williamson, Water Compliance Supervisor, Guelph District Office, Drinking Water and Environmental Compliance Division, Ministry of the Environment, Conservation and Parks.

Question ID	MRDW1000001	Question Type	Information
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	MRDW1020001	Question Type	Legislative
Question:			
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 Requirement	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.			
Four (4) Form 1's were approved during the inspection period for the Artisan Ridge phase 2, Confederation Heights phase 10, Hodgekins phase 2, and Pilkington street. The completed forms appear to meet the requirements of Condition 3 of Schedule B of the DWWP.			

Question ID	MRDW1114001	Question Type	Legislative
Question:			

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 Requirement	SDWA 31 (1);
Observation	
The owner had evidence that required notifications to all legal owners associated with the Drinking Water System had been made during the inspection period.	

Question ID	MRDW1025001	Question Type	Legislative
Question:			
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 Requirement	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.			

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 not measured as required for the large municipal residential distribution system.			
During the inspection it was noted that the distribution system chlorine residual samples taken on December 30, 2022, were taken less then 48 hours after the chlorine residual samples taken on December 28, 2022. Schedule 7-2 (4) 2 of O. Reg. 170/03 requires that 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 day referred to in paragraph 1.			
On January 31, 2023, the City of Thorold submitted information to the undersigned Provincial Officer indicating that certified operators received training (January 25, 2023), on sampling during non-routine weeks, DWQMS document A1 - Water Sampling - Chlorine Residuals, and the requirements specified in Schedule 7-2 (4) of O. Reg. 170/03. The city			

has also committed to providing this training to the operator that was absent (due to extended leave), within two (2) weeks of their return to work, and, submitting confirmation of the training to the undersigned Provincial Officer, within two (2) weeks of the training taking place.

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). During the inspection period, there was one adverse water quality incident (AWQI) reported to the Ministry for total coliform exceedances. The required notification and corrective action were taken.			

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. The City of Thorold is required to take at least 22 microbiological samples (testing for Total Coliform bacteria and E.coli) per month, including at least one sample per week, as per Schedule 10 of O. Reg. 170/03. At least 25% of the samples must also be tested for Heterotrophic Plate Count (HPC). During the inspection it was noted that the city collects 32 to 40 routine samples each month in the Thorold (Decew) DS. A review of sampling records indicated that the city has complied with all microbiological sampling requirements.			

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. Haloacetic acid sampling was conducted on the following dates during this inspection period: February 23/22, June 6/22, August 31/22, and November 16/22. At the time of the inspection, the Running Annual Average was 12.85 µg/L. HAA samples were collected from two locations in the distribution system.			

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.

Trihalomethane sampling was conducted on the following dates during this inspection period: February 23/22, June 6/22, August 31/22, and November 16/22. At the time of the inspection, the Running Annual Average was 26.43 µg/L. THM samples were collected from two locations in distribution system.

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 16-6.			

Question ID	MRDW1113000	Question Type	Legislative
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Question:	
Have all changes to the system registration information been provided to the Ministry within ten (10) days of the change?	
Legislative Requirement	SDWA O. Reg. 170/03 10.1 (3);
Observation	
All changes to the system registration information were provided within ten (10) days of the change.	

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.			

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.			

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);		

Observation
Logbooks were properly maintained and contained the required information.

Question ID	MRDW1062001	Question Type	Legislative
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;		
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
Question: Has the owner provided security measures to protect components of the drinking water system?			
Legislative Requirement	Not Applicable		
Observation The owner had provided security measures to protect components of the drinking water system. The sample stations within the distribution system are locked, and the non-potable water bulk-filling station at the Public Works facility on Beaverdams Road is within a fenced area and has a backflow prevention device.			

Question ID	MRDW1073001	Question Type	Legislative
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);		
Observation			

The overall responsible operator had been designated for each subsystem.

The Public Works Manager has been designated as the ORO, and the Water/Wastewater Compliance Supervisor is the backup ORO.

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. A search of the Ontario Water Wastewater Certification Office (OWWCO) operator listing report website showed that all operators have the required certification.			

APPENDIX A

Reference and Guidance Material

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

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

Ministry of the Environment, Conservation and Parks - Inspection Summary Rating Record (Reporting Year - 2022-2023)

DWS Name: THOROLD (DECEW) DISTRIBUTION SYSTEM
DWS Number: 220004313
DWS Owner: THE CORPORATION OF THE CITY OF THOROLD
Municipal Location: THOROLD

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Jan-13-2023
Ministry Office: Niagara District Office

Maximum Risk Rating: 224

Inspection Module	Non Compliance Rating
Operations Manuals	0 / 28
Reporting & Corrective Actions	0 / 25
Other Inspection Findings	21 / 171
Overall - Calculated	21 / 224

Inspection Risk Rating: 9.38%

Final Inspection Rating: 90.62%

Ministry of the Environment, Conservation and Parks - Detailed Inspection Rating Record (Reporting Year - 2022-2023)

DWS Name: THOROLD (DECEW) DISTRIBUTION SYSTEM
DWS Number: 220004313
DWS Owner Name: THE CORPORATION OF THE CITY OF THOROLD
Municipal Location: THOROLD

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Jan-13-2023
Ministry Office: Niagara District Office

Non-Compliant Question(s)	Question Rating
Other Inspection Findings	
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?	21
Overall - Total	21

Maximum Question Rating: 224

Inspection Risk Rating: 9.38%

FINAL INSPECTION RATING: 90.62%

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Conservation and Parks
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February 22, 2023

****Sent via email****

City of Thorold
Public Works Department
1543 Beaverdams Road
Thorold, ON L2V 1N6

Attention: Mr. Steve Santo, Manager of Public Works

Re: Thorold (Port Robinson) Distribution System, DWS#260049582
2022-23 Inspection Report

Dear Mr. Santo,

Please find the enclosed copy of the inspection reports for the Thorold (Port Robinson) Distribution System under the Ministry's focused inspection protocol to assess compliance with Safe Drinking Water legislation.

The items with found within the section entitled "Non-Compliance/Non-Conformance Items" which have sections under legislative requirements, outline non-compliance with regulatory requirements contained within an Act, a Regulation, or site-specific approvals, licenses, permits, orders, or guidelines. Please ensure that the required actions are completed within the prescribed timeframe.

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If you wish to discuss the results of the inspection in more detail, please feel free to contact myself or Lisa Williamson, Water Compliance Supervisor, West Central Region at (226)-979-8468.

Yours truly,



Wendy Wingate
Provincial Officer,
Water Inspection Program,
Guelph District Office
Tel: (519) 830-1150

Encl.

cc:

Kory Yungblut, Supervisor, Water/Wastewater Compliance, City of Thorold (email)
Colin Horne, Niagara Region Public Health Unit (email)
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Lisa Williamson, Water Compliance Supervisor, West Central Region, MECP (email)
Elizabeth Chee Sing, Water Compliance Supervisor, West Central Region, MECP (email)
MECP, NDO File: SI NI TH A540, 22-23 Thorold (Port Robinson) Distribution System DWS#260049582



THOROLD (PORT ROBINSON) DISTRIBUTION SYSTEM
3540 SCHMON PKY, THOROLD, ON, L2V 4Y6

Inspection Report

System Number: 260049582
Entity: THE CORPORATION OF THE
CITY OF THOROLD
Inspection Start Date: 01/13/2023
Inspection End Date: 02/08/2023
Inspected By: Wendy Wingate
Badge #: 178

A handwritten signature in black ink, appearing to read "W. Wingate", written over a horizontal line.

(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	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/Corrective Action(s) The secondary disinfectant residual was not measured as required for the large municipal residential distribution system. During the inspection it was noted that the distribution system chlorine residual samples taken on December 30, 2022, were taken less then 48 hours after the chlorine residual samples taken on December 28, 2022. Schedule 7-2 (4) 2 of O. Reg. 170/03 requires that 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 day referred to in paragraph 1. On January 31, 2023, the City of Thorold submitted information to the undersigned Provincial Officer indicating that certified operators received training (January 25, 2023), on sampling during non-routine weeks, DWQMS document A1 - Water Sampling - Chlorine Residuals, and the requirements specified in Schedule 7-2 (4) of O. Reg. 170/03. The city has also committed to providing this training to the operator that was absent (due to extended leave), within two (2) weeks of their return to work, and, submitting confirmation of the training to the undersigned Provincial Officer, within two (2) weeks of the training taking place.			

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 City of Thorold owns and operates the Thorold (Port Robinson) Distribution System which provides drinking water to approximately 1,000 people. The system consists of approximately 6 km of watermains, with approximately 25 isolation valves and 35 fire hydrants located throughout the system. This system is classified as a WD Class 1.</p> <p>The Thorold (Port Robinson) Distribution System is a stand-alone distribution system that receives chlorinated water from the Niagara Falls Water Treatment Plant which is owned and operated by the Region of Niagara. A detailed description of the water source for this system can be found in the Niagara Falls Water Treatment Plant Municipal Drinking Water License, the Drinking Water Works Permit, and the Niagara Falls Water Treatment Plant inspection report.</p> <p>An announced inspection of the Thorold (Port Robinson) Distribution System was conducted on January 13, 2023. The inspection included a compliance assessment with applicable documentation and a review of the maintenance records. The inspection period</p>			

covered by this report is from February 1, 2022, to January 13, 2023.

Municipal Drinking Water Licence (MDWL) #075-102, Issue 3 and Drinking Water Works Permit (DWWP) #075-202, Issue 5 dated September 24, 2020, were valid during the inspection period.

This inspection report has been reviewed and approved by Lisa Williamson, Water Compliance Supervisor, Guelph District Office, Drinking Water and Environmental Compliance Division, Ministry of the Environment, Conservation and Parks.

Question ID	MRDW1000001	Question Type	Information
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	MRDW1018001	Question Type	Legislative
Question: Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?			
Legislative Requirement	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	MRDW1114001	Question Type	Legislative
Question: 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 Requirement	SDWA 31 (1);		
Observation			

The owner had evidence that required notifications to all legal owners associated with the Drinking Water System had been made during the inspection period.

Question ID	MRDW1025001	Question Type	Legislative
Question: 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 Requirement		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.			

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 not measured as required for the large municipal residential distribution system.			
During the inspection it was noted that the distribution system chlorine residual samples taken on December 30, 2022, were taken less than 48 hours after the chlorine residual samples taken on December 28, 2022. Schedule 7-2 (4) 2 of O. Reg. 170/03 requires that 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 day referred to in paragraph 1.			
On January 31, 2023, the City of Thorold submitted information to the undersigned Provincial Officer indicating that certified operators received training (January 25, 2023), on sampling during non-routine weeks, DWQMS document A1 - Water Sampling - Chlorine Residuals, and the requirements specified in Schedule 7-2 (4) of O. Reg. 170/03. The city has also committed to providing this training to the operator that was absent (due to extended leave), within two (2) weeks of their return to work, and, submitting confirmation of the training to the undersigned Provincial Officer, within two (2) weeks of the training taking place.			

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 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	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. The City of Thorold is required to take at least 9 microbiological samples (testing for Total Coliform bacteria and E.coli) per month, including at least one sample per week, as per Schedule 10 of O. Reg. 170/03. At least 25% of the samples must also be tested for Heterotrophic Plate Count (HPC). During the inspection it was noted that the City collects 12 to 15 routine samples each month in the Thorold (South End) DS. A review of sampling records indicated that the City has complied with all microbiological sampling requirements.			

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. Haloacetic acid sampling was conducted on the following dates during this inspection period: February 23/22, June 6/22, August 31/22, and November 16/22. At the time of the inspection, the Running Annual Average was 16.38 µg/L. HAA samples were collected from two locations in the distribution system.			

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. Trihalomethane sampling was conducted on the following dates during this inspection period: February 23/22, June 6/22, August 31/22, and November 16/22. At the time of the inspection, the Running Annual Average was 31.93 µg/L. THM samples were collected from two locations in distribution system.			

Question ID	MRDW1113000	Question Type	Legislative
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Question:	
Have all changes to the system registration information been provided to the Ministry within ten (10) days of the change?	
Legislative Requirement	SDWA O. Reg. 170/03 10.1 (3);
Observation	
All changes to the system registration information were provided within ten (10) days of the change.	

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.			

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.			

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);		

Observation
Logbooks were properly maintained and contained the required information.

Question ID	MRDW1062001	Question Type	Legislative
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;		
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
Question: Has the owner provided security measures to protect components of the drinking water system?			
Legislative Requirement	Not Applicable		
Observation The owner had provided security measures to protect components of the drinking water system. The sample stations within the distribution system are locked, and the non-potable water bulk-filling station at the Public Works facility on Beaverdams Road is within a fenced area and has a backflow prevention device.			

Question ID	MRDW1073001	Question Type	Legislative
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);		
Observation			

The overall responsible operator had been designated for each subsystem.

The Public Works Manager has been designated as the ORO, and the Water/Wastewater Compliance Supervisor is the backup ORO.

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. A search of the Ontario Water Wastewater Certification Office (OWWCO) operator listing report website showed that all operators have the required certification.			

APPENDIX A

Reference and Guidance Material

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

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

Ministry of the Environment, Conservation and Parks - Inspection Summary Rating Record (Reporting Year - 2022-2023)

DWS Name: THOROLD (PORT ROBINSON) DISTRIBUTION SYSTEM
DWS Number: 260049582
DWS Owner: THE CORPORATION OF THE CITY OF THOROLD
Municipal Location: THOROLD

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Jan-13-2023
Ministry Office: Niagara District Office

Maximum Risk Rating: 189

Inspection Module	Non Compliance Rating
Operations Manuals	0 / 28
Reporting & Corrective Actions	0 / 4
Other Inspection Findings	21 / 157
Overall - Calculated	21 / 189

Inspection Risk Rating:	11.11%
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Final Inspection Rating:	88.89%
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Ministry of the Environment, Conservation and Parks - Detailed Inspection Rating Record (Reporting Year - 2022-2023)

DWS Name: THOROLD (PORT ROBINSON) DISTRIBUTION SYSTEM
DWS Number: 260049582
DWS Owner Name: THE CORPORATION OF THE CITY OF THOROLD
Municipal Location: THOROLD

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Jan-13-2023
Ministry Office: Niagara District Office

Non-Compliant Question(s)	Question Rating
Other Inspection Findings	
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?	21
Overall - Total	21

Maximum Question Rating: 189

Inspection Risk Rating: 11.11%

FINAL INSPECTION RATING: 88.89%

Ministry of the Environment,
Conservation and Parks
Drinking Water and Environmental
Compliance Division
West Central Region
Guelph District Office

1 Stone Road West
4th Floor
Guelph, Ontario N1G 4Y2
Tel.: 519 826-4256
Fax: 519 826-4286

Ministère de l'Environnement de la
Protection de la nature et des Parcs
Division de la conformité en matière
d'eau potable et d'environnement
Direction régionale du Centre-Ouest
Bureau de district de Guelph

1, chemin Stone ouest
4^e étage
Guelph (Ontario) N1G 4Y2
Tél.: 519 826-4256
Télé.: 519 826-4286



February 22, 2023

****Sent via email****

City of Thorold
Public Works Department
1543 Beaverdams Road
Thorold, ON L2V 1N6

Attention: Mr. Steve Santo, Manager of Public Works

Re: Thorold (South End) Distribution System, DWS#260049621
2022-23 Inspection Report

Dear Mr. Santo,

Please find the enclosed copy of the inspection reports for the Thorold (South End) Distribution System under the Ministry's focused inspection protocol to assess compliance with Safe Drinking Water legislation.

The items with found within the section entitled "Non-Compliance/Non-Conformance Items" which have sections under legislative requirements, outline non-compliance with regulatory requirements contained within an Act, a Regulation, or site-specific approvals, licenses, permits, orders, or guidelines. Please ensure that the required actions are completed within the prescribed timeframe.

The items with "Not Applicable" legislative requirements provide information to the owner or operating authority outlining practices or standards established through existing and emerging industry standards that should be considered in order to advance current efforts. These items do not, in themselves, constitute violations. More recommendations are also provided within the body of the report.

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 Summary Rating Record (IRR), included as an Appendix of the inspection report, 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 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 months of the completion of the inspection).

Section 19 of the Safe Drinking Water Act (Standard of Care) creates several obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in "Taking Care of Your Drinking Water: A guide for members of municipal council" found under "Resources" on the Drinking Water Ontario website at www.ontario.ca/drinkingwater.

If you wish to discuss the results of the inspection in more detail, please feel free to contact myself or Lisa Williamson, Water Compliance Supervisor, West Central Region at (226)-979-8468.

Yours truly,



Wendy Wingate
Provincial Officer,
Water Inspection Program,
Guelph District Office
Tel: (519) 830-1150

Encl.

cc:

Kory Yungblut, Water/Wastewater Compliance Supervisor, City of Thorold (email)
Colin Horne, Niagara Region Public Health Unit (email)
Jason Wolf, Niagara Region Public Health Unit (email)
Leilani Lee-Yates, Niagara Peninsula Conservation Authority (email)
Thomas Proks, Niagara Peninsula Conservation Authority (email)
Lisa Williamson, Water Compliance Supervisor, West Central Region, MECP (email)
Elizabeth Chee Sing, Water Compliance Supervisor, West Central Region, MECP (email)
MECP, NDO File: SI NI TH A540, 22-23 Thorold (South End) Distribution System DWS#260049621



THOROLD SOUTH END DISTRIBUTION SYSTEM
3540 SCHMON PKY, THOROLD, ON, L2V 4Y6
Inspection Report

System Number: 260049621

Entity: THE CORPORATION OF THE
CITY OF THOROLD

Inspection Start Date: 01/13/2023

Inspection End Date: 02/08/2023

Inspected By: Wendy Wingate

Badge #: 178



(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	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/Corrective Action(s) The secondary disinfectant residual was not measured as required for the large municipal residential distribution system. During the inspection it was noted that the distribution system chlorine residual samples taken on December 30, 2022, were taken less then 48 hours after the chlorine residual samples taken on December 28, 2022. Schedule 7-2 (4) 2 of O. Reg. 170/03 requires that 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 day referred to in paragraph 1. On January 31, 2023, the City of Thorold submitted information to the undersigned Provincial Officer indicating that certified operators received training (January 25, 2023), on sampling during non-routine weeks, DWQMS document A1 - Water Sampling - Chlorine Residuals, and the requirements specified in Schedule 7-2 (4) of O. Reg. 170/03. The city has also committed to providing this training to the operator that was absent (due to extended leave), within two (2) weeks of their return to work, and, submitting confirmation of the training to the undersigned Provincial Officer, within two (2) weeks of the training taking place.			

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 City of Thorold owns and operates the Thorold (South End) Distribution System which provides drinking water to approximately 600 people. The system consists of approximately 5.5 km of watermains, with approximately 30 isolation valves and 40 fire hydrants located throughout the system. This system is classified as a WD Class 1.</p> <p>The Thorold (South End) Distribution System is a stand-alone distribution system that receives chlorinated water from the Welland Water Treatment Plant which is owned and operated by the Region of Niagara. A detailed description of the water source for this system can be found in the Welland Water Treatment Plant Municipal Drinking Water License, the Drinking Water Works Permit, and the Welland Water Treatment Plant inspection report.</p> <p>An announced inspection of the Thorold (South End) Distribution System was conducted on January 13, 2023. The inspection included a compliance assessment with applicable documentation and a review of the maintenance records. The inspection period covered by</p>			

this report is from February 1, 2022, to January 13, 2023.

Municipal Drinking Water Licence (MDWL) #075-103, Issue 2 and Drinking Water Works Permit (DWWP) #075-203, Issue 2 dated September 24, 2020, were valid during the inspection period.

This inspection report has been reviewed and approved by Lisa Williamson, Water Compliance Supervisor, Guelph District Office, Drinking Water and Environmental Compliance Division, Ministry of the Environment, Conservation and Parks.

Question ID	MRDW1000001	Question Type	Information
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	MRDW1020001	Question Type	Legislative
Question:			
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 Requirement	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.			
Five (5) Form 1's were approved during the inspection period for the Allenbrg Estates, Hansler Heights phase 2, Legacy phase 2 stage1, Rolling Meadows phase 14, and Rolling Meadows phase 16. The completed forms appear to meet the requirements of Condition 3 of Schedule B of the DWWP.			

Question ID	MRDW1114001	Question Type	Legislative
Question:			

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 Requirement	SDWA 31 (1);
Observation	
The owner had evidence that required notifications to all legal owners associated with the Drinking Water System had been made during the inspection period.	

Question ID	MRDW1025001	Question Type	Legislative
Question: 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 Requirement	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.			

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 not measured as required for the large municipal residential distribution system.			
During the inspection it was noted that the distribution system chlorine residual samples taken on December 30, 2022, were taken less then 48 hours after the chlorine residual samples taken on December 28, 2022. Schedule 7-2 (4) 2 of O. Reg. 170/03 requires that 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 day referred to in paragraph 1.			
On January 31, 2023, the City of Thorold submitted information to the undersigned Provincial Officer indicating that certified operators received training (January 25, 2023), on sampling during non-routine weeks, DWQMS document A1 - Water Sampling - Chlorine Residuals, and the requirements specified in Schedule 7-2 (4) of O. Reg. 170/03. The city			

has also committed to providing this training to the operator that was absent (due to extended leave), within two (2) weeks of their return to work, and, submitting confirmation of the training to the undersigned Provincial Officer, within two (2) weeks of the training taking place.

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 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	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. The City of Thorold is required to take at least 8 microbiological samples (testing for Total Coliform bacteria and E.coli) per month, including at least one sample per week, as per Schedule 10 of O. Reg. 170/03. At least 25% of the samples must also be tested for Heterotrophic Plate Count (HPC). During the inspection it was noted that the city collects 12 to 15 routine samples each month in the Thorold (South End) DS. A review of sampling records indicated that the city has complied with all microbiological sampling requirements.			

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. Haloacetic acid sampling was conducted on the following dates during this inspection period: February 23/22, June 6/22, August 31/22, and November 16/22. At the time of the inspection, the Running Annual Average was 7.54 µg/L. HAA samples were collected from one location in the distribution system.			

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. Trihalomethane sampling was conducted on the following dates during this inspection period: February 23/22, June 6/22, August 31/22, and November 16/22. At the time of the			

inspection, the Running Annual Average was 21.33 µg/L. THM samples were collected from two locations in distribution system.

Question ID	MRDW1113000	Question Type	Legislative
Question: Have all changes to the system registration information been provided to the Ministry within ten (10) days of the change?			
Legislative Requirement	SDWA O. Reg. 170/03 10.1 (3);		
Observation All changes to the system registration information were provided within ten (10) days of the change.			

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.			

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.			

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);
Observation	
Logbooks were properly maintained and contained the required information.	

Question ID	MRDW1062001	Question Type	Legislative
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;		
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
Question: Has the owner provided security measures to protect components of the drinking water system?			
Legislative Requirement	Not Applicable		
Observation The owner had provided security measures to protect components of the drinking water system. The sample stations within the distribution system are locked, and the non-potable water bulk-filling station at the Public Works facility on Beaverdams Road is within a fenced area and has a backflow prevention device.			

Question ID	MRDW1073001	Question Type	Legislative
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);
Observation	
The overall responsible operator had been designated for each subsystem.	
The Public Works Manager has been designated as the ORO, and the Water/Wastewater Compliance Supervisor is the backup ORO.	

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. A search of the Ontario Water Wastewater Certification Office (OWWCO) operator listing report website showed that all operators have the required certification.			

APPENDIX A

Reference and Guidance Material

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

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

Ministry of the Environment, Conservation and Parks - Inspection Summary Rating Record (Reporting Year - 2022-2023)

DWS Name: THOROLD SOUTH END DISTRIBUTION SYSTEM
DWS Number: 260049621
DWS Owner: THE CORPORATION OF THE CITY OF THOROLD
Municipal Location: THOROLD

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Jan-13-2023
Ministry Office: Niagara District Office

Maximum Risk Rating: 179

Inspection Module	Non Compliance Rating
Operations Manuals	0 / 28
Reporting & Corrective Actions	0 / 4
Other Inspection Findings	21 / 147
Overall - Calculated	21 / 179

Inspection Risk Rating:	11.73%
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Final Inspection Rating:	88.27%
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Ministry of the Environment, Conservation and Parks - Detailed Inspection Rating Record (Reporting Year - 2022-2023)

DWS Name: THOROLD SOUTH END DISTRIBUTION SYSTEM
DWS Number: 260049621
DWS Owner Name: THE CORPORATION OF THE CITY OF THOROLD
Municipal Location: THOROLD

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Jan-13-2023
Ministry Office: Niagara District Office

Non-Compliant Question(s)	Question Rating
Other Inspection Findings	
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?	21
Overall - Total	21

Maximum Question Rating: 179

Inspection Risk Rating: 11.73%

FINAL INSPECTION RATING: 88.27%