

**Ministry of the Environment
and Climate Change**

Safe Drinking Water
Branch

Owen Sound District Office
101 17th St. E, 3rd Floor
Owen Sound ON N4K 0A5

**Ministère de l'Environnement et
de l'Action en matière de
changement climatique**

Direction du contrôle de la qualité de
l'eau potable

Bureau du district de Owen Sound
101, 17^e rue Est, 3^e étage
Owen Sound ON N4K 0A5



October 17, 2017

Sent by Email: devans@northhuron.ca

Township of North Huron
274 Josephine Street
P.O. Box 90
Wingham ON N0G 2W0

Attention: Dwayne Evans
CAO

Re: 2017/2018 Inspection Report 1-F6JGI
Wingham Drinking Water System #220001502
Municipal Drinking Water Licence #090-102 Issue #3 & 4
Drinking Water Works Permit #090-202, Issue #3 & 4

The enclosed report documents findings of the inspection that was performed on September 14, 2017.

Two sections of the report, namely "Actions Required" and "Recommended Actions", specify due dates for the submission of information or plans to my attention.

Please note that "Actions Required" are linked to incidents of non-compliance with regulatory requirements contained within an Act, a Regulation, or site-specific approvals, orders or instructions; "Recommended Actions" convey information that the owner or operating authority should consider implementing in order to conform with existing and emerging industry standards.

The report includes an Inspection Summary Rating Record as an appendix. This record forms part of the ministry's comprehensive, risk-based inspection process. The rating provides a quantitative measure of the inspection results for this specific drinking water system for the reporting year. An inspection rating that is less than 100 per cent does not mean that the drinking water from the system is unsafe. The primary goals of this assessment are to encourage ongoing improvement of drinking water systems and to measure this progress from year to year.

I would like to remind you that Section 19 of the Safe Drinking Water Act, 2002 (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems, including members of municipal councils. "*Taking Care*

of Your Drinking Water: A guide for members of municipal council", a publication found on the [Drinking Water Ontario website](http://www.ontario.ca/environment-and-energy/municipal-drinking-water-systems-licencing-registration-and-permits) (<http://www.ontario.ca/environment-and-energy/municipal-drinking-water-systems-licencing-registration-and-permits>), provides further information about these obligations.

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

Yours truly,

Matthew Shannon
Water Compliance Inspector
Phone: 519-376-3683
e-mail: matthew.shannon@ontario.ca

Enclosure

ec: Jean-Guy Albert, Public Health Manager, Huron County Health Unit
Deb Primeau, Drinking Water Administrative Assistant, Huron County Health Unit
Kyllie McDonagh, Administrative Assistant, Veolia North America
Don Nicholson, Overall Responsible Operator, Veolia North America
John Graham, Project Manager, Veolia North America
Phil Beard, General Manager, Maitland Valley Conservation Authority

c: File SI-HU-NH-AL-540 (2017)



Ministry of the Environment and Climate Change

WINGHAM DRINKING WATER SYSTEM
Inspection Report

Site Number:	220001502
Inspection Number:	1-F6JGI
Date of Inspection:	Sep 14, 2017
Inspected By:	Matthew Shannon

OWNER INFORMATION:

Company Name:	NORTH HURON, THE CORPORATION OF THE TOWNSHIP OF		
Street Number:	274	Unit Identifier:	
Street Name:	JOSEPHINE St		
City:	WINGHAM		
Province:	ON	Postal Code:	N0G 2W0

CONTACT INFORMATION

Type:	Operating Authority	Name:	John Graham
Phone:	(519) 524-6583	Fax:	(519) 524-9358
Email:	john.graham@veolia.com		
Title:	Project Manager		
Type:	Main Contact	Name:	Kyllie McDonagh
Phone:	(519) 357-9942	Fax:	(519) 357-1110
Email:	kyllie.mcdonagh@veolia.com		
Title:	Compliance Officer		
Type:	Operating Authority	Name:	Don Nicholson
Phone:	(519) 524-6583	Fax:	(519) 524-9358
Email:	don.nicholson@veolia.com		
Title:	Overall Responsible Operator		

INSPECTION DETAILS:

Site Name:	WINGHAM DRINKING WATER SYSTEM
Site Address:	23 ALBERT Street West WINGHAM ON N0G 2W0
County/District:	NORTH HURON
MOECC District/Area Office:	Owen Sound Area Office
Health Unit:	HURON COUNTY HEALTH UNIT
Conservation Authority:	Maitland Valley Conservation Authority
MNR Office:	Guelph District Office
Category:	Large Municipal Residential
Site Number:	220001502
Inspection Type:	Unannounced
Inspection Number:	1-F6JGI
Date of Inspection:	Sep 14, 2017
Date of Previous Inspection:	Oct 13, 2016

COMPONENTS DESCRIPTION

Site (Name):	Well 3 - 209 Water Street	Sub Type:
Type:	Source	
Comments:		

As outlined in more detail in Schedule A of the Township's Permit, Well 3 is a 323 mm diameter, 102.1 m deep drilled groundwater production well equipped with a submersible pump rated at 40 L/s. Treatment chemicals are added for disinfection and iron sequestering. The treated water discharges into the distribution system via a pressurized

contact chamber.

A portable generator stored at the site is available to provide emergency power.

Site (Name): Well 4 - 23 Albert Street

Type: Source

Sub Type:

Comments:

Well 4 is a 356 mm diameter, 96.6 m deep drilled groundwater production well equipped with a submersible pump rated at 61 L/s. Well 4 discharges into the adjacent reservoir.

Site (Name): Reservoir & High Lift Pump Station - 23 Albert Street

Type: Other

Sub Type:

Comments:

The inlet to reservoir is used to add treatment chemicals for disinfection and iron sequestering. Besides the 100 m³ reservoir, the building houses a 1.5 m diameter by 4 m contact tank. The water level in the reservoir and contact tank water level is maintained by controls that activate Well 4.

Treated water is pumped into the distribution system by three electrically driven high lift pumps, each of which has a rated capacity of 33 L/s.

The building houses a SCADA system that includes on-line turbidity and chlorine residual monitoring for each well.

Further, the system will generate alarms in the event of pump failure, or when pressure and standpipe level set points are breached.

Emergency power is supplied by an automatic standby diesel generator.

Site (Name): Standpipe - 199 John Street

Type: Other

Sub Type:

Comments:

An 8.5m diameter by 30.8 m high standpipe maintains pressure in the distribution system. The water level in the standpipe is controlled by two parallel pressure transducers that activate Well 3 and the high lift pumps.

Site (Name): Distribution System

Type: Other

Sub Type:

Comments:

The Wingham distribution system comprises of approximately 29 kilometers of watermain. The system serves approximately 2850 residents with 1050 services connections.

INSPECTION SUMMARY:

Introduction

- The primary focus of this inspection is to confirm compliance with Ministry of the Environment and Climate Change (MOECC) legislation as well as evaluating conformance with ministry drinking water related 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.

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.

This report is based on a "focused" inspection of the system. Although the inspection involved fewer activities than those normally undertaken in a detailed inspection, it contained critical elements required to assess key compliance issues. This system was chosen for a focused inspection because the system's performance met the ministry's criteria, most importantly that there were no deficiencies as identified in O.Reg. 172/03 over the past 3 years. The undertaking of a focused inspection at this drinking water system does not ensure that a similar type of inspection will be conducted at any point in the future.

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.

On September 14, 2017, Provincial Officer Matthew Shannon inspected the Wingham drinking water system with the assistance of Don Nicholson, Veolia North America. Additional data was provided by Kyllie McDonagh, Veolia North America.

The inspection review period was October 13, 2016 to September 14, 2017.

Source

- 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.
- 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.

Capacity Assessment

- 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.
- 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.

Treatment Processes

- The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.

Treatment Processes

- 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.
- 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.

For ground water systems the treatment process must, at 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 prior to the first consumer.

Both wells 3 and 4 have a pre chlorine contact chamber alarm and auto lock out of 0.8mg/L and a POE chlorine alarm and auto lock out of 0.7mg/L. These alarms help ensure the free chlorine residual required to meet their CT value (Well #3 = 0.08 mg/L and Well #4 = 0.19 mg/l) is never approached.

A review of the Wingham SCADA data indicates the both treatment facilities were operated so that primary disinfection was met at all times water was being directed to the users.

- 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.

The lowest measured free chlorine residual in the Wingham distribution system was 0.54 mg/L.

Treatment Process Monitoring

- 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.
- The secondary disinfectant residual was measured as required for the distribution system.
- Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.
- 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.
- 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.
- All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.

Operations Manuals

- The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.
- The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and

Operations Manuals

Municipal Drinking Water Licence issued under Part V of the SDWA.

Logbooks

- 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.

Security

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

Certification and Training

- The overall responsible operator had been designated for each subsystem.
The designated overall responsible operator is Don Nicholson, Veolia North America.
- Operators in charge had been designated for all subsystems which comprised the drinking-water system.
- All operators possessed the required certification.
- Only certified operators made adjustments to the treatment equipment.

Water Quality Monitoring

- All microbiological water quality monitoring requirements for distribution samples were being met.
- All microbiological water quality monitoring requirements for treated samples were being met.
- All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.
Inorganic parameters listed in Schedule 23 of O. Reg. 170/03 were last sampled in June 2015. Sample results are available from the Township of North Huron upon request.
- All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.
Organic parameters listed in Schedule 24 of O. Reg. 170/03 were last sampled in June 2015. Sample results are available from the Township of North Huron upon request.
- All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location.
All samples collected in the first three quarters of 2017 had concentrations of HAA below the method detection limit of 5.3 ug/L.
The owner and operating authority are reminded that HAA samples should be collected from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of haloacetic acids. This location would usually be as close to the POE into the distribution system as possible.

Water Quality Monitoring

- **All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.**
The running annual average concentration of trihalomethanes, at the time of the inspection, was 6.2 ug/L. The Ontario Drinking Water Quality Standard is 100 ug/L.
- **All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.**
- **All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**
Sodium was last sampled in January 2013. The sodium concentration in Well #3 was 11.9 mg/L and the sodium concentration in Well #4 was 15.6 mg/L. The Ontario Regulation 170/03 reporting threshold concentration for sodium is 20 mg/L.
Sodium is required to be sampled at least once every sixty (60) months.
- **All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**
Fluoride was last sampled in January 2013. Fluoride concentrations for each well were below the Ontario Drinking Water Quality Standard of 1.5 mg/L. Fluoride is required to be sampled at least once every sixty (60) months.
- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

Water Quality Assessment

- **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).**

Reporting & Corrective Actions

- **Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.**

NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

Not Applicable

SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

Not Applicable

SIGNATURES

Inspected By:
Matthew Shannon

Signature: (Provincial Officer)

Reviewed & Approved By:
John Ritchie

Signature: (Supervisor)

Review & Approval Date: 17/10/2017

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.



Ministry of the Environment and Climate Change
Drinking Water Inspection Report

APPENDIX A

INSPECTION SUMMARY RATING RECORD

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2017-2018)

DWS Name: WINGHAM DRINKING WATER SYSTEM
DWS Number: 220001502
DWS Owner: North Huron, The Corporation Of The Township Of
Municipal Location: North Huron

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Focused
Inspection Date: September 14, 2017
Ministry Office: Owen Sound District Office

Maximum Question Rating: 447

Inspection Module	Non-Compliance Rating
Source	0 / 28
Capacity Assessment	0 / 30
Treatment Processes	0 / 60
Operations Manuals	0 / 28
Logbooks	0 / 14
Certification and Training	0 / 42
Water Quality Monitoring	0 / 112
Reporting & Corrective Actions	0 / 21
Treatment Process Monitoring	0 / 112
TOTAL	0 / 447

Inspection Risk Rating 0.00%

FINAL INSPECTION RATING: 100.00%

Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2017-2018)

DWS Name: WINGHAM DRINKING WATER SYSTEM
DWS Number: 220001502
DWS Owner: North Huron, The Corporation Of The Township Of
Municipal Location: North Huron

Regulation: O.REG 170/03

Category: Large Municipal Residential System

Type Of Inspection: Focused

Inspection Date: September 14, 2017

Ministry Office: Owen Sound District Office

Maximum Question Rating: 447

Inspection Risk Rating 0.00%

FINAL INSPECTION RATING: 100.00%



Ministry of the Environment and Climate Change
Drinking Water Inspection Report

APPENDIX B

REFERENCE GUIDE FOR STAKEHOLDERS

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 Public Information Centre if you need assistance or have questions at 1-800-565-4923/416-325-4000 or picemail.moe@ontario.ca.

For more information on Ontario's drinking water visit www.ontario.ca/drinkingwater and email drinking.water@ontario.ca to subscribe to drinking water news.



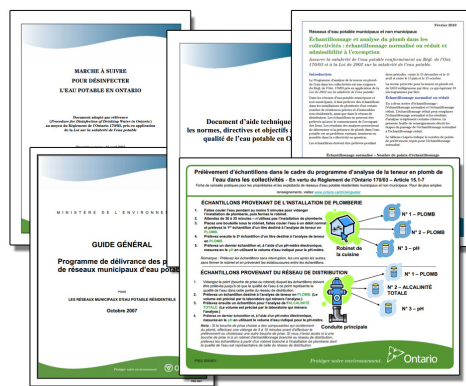
PUBLICATION TITLE	PUBLICATION NUMBER
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	7889e01
FORMS: Drinking Water System Profile Information, Laboratory Services Notification, Adverse Test Result Notification Form	7419e, 5387e, 4444e
Procedure for Disinfection of Drinking Water in Ontario	4448e01
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	7152e
Total Trihalomethane (TTHM) Reporting Requirements Technical Bulletin (February 2011)	8215e
Filtration Processes Technical Bulletin	7467
Ultraviolet Disinfection Technical Bulletin	7685
Guide for Applying for Drinking Water Works Permit Amendments, Licence Amendments, Licence Renewals and New System Applications	7014e01
Certification Guide for Operators and Water Quality Analysts	
Guide to Drinking Water Operator Training Requirements	9802e
Taking Samples for the Community Lead Testing Program	6560e01
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	7423e
Guide: Requesting Regulatory Relief from Lead Sampling Requirements	6610
Drinking Water System Contact List	7128e
Technical Support Document for Ontario Drinking Water Quality Standards	4449e01

ontario.ca/drinkingwater

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 Centre d'information au public au 1 800 565-4923 ou au 416 325-4000, ou encore à picemail.moe@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 ou envoyez un courriel à drinking.water@ontario.ca pour suivre l'information sur l'eau potable.

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Prendre soin de votre eau potable – Un guide destiné aux membres des conseils municipaux	7889f01
Renseignements sur le profil du réseau d'eau potable, Avis de demande de services de laboratoire, Formulaire de communication de résultats d'analyse insatisfaisants et du règlement des problèmes	7419f, 5387f, 4444f
Marche à suivre pour désinfecter l'eau potable en Ontario	4448f01
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids (en anglais seulement)	7152e
Total Trihalomethane (TTHM) Reporting Requirements: Technical Bulletin (février 2011) (en anglais seulement)	8215e
Filtration Processes Technical Bulletin (en anglais seulement)	7467
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	7685
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable, de modification du permis de réseau municipal d'eau potable, de renouvellement du permis de réseau municipal d'eau potable et de permis pour un nouveau réseau	7014f01
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	
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802f
Prélèvement d'échantillons dans le cadre du programme d'analyse de la teneur en plomb de l'eau dans les collectivités	6560f01
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	7423f
Guide: Requesting Regulatory Relief from Lead Sampling Requirements (en anglais seulement)	6610
Liste des personnes-ressources du réseau d'eau potable	7128f
Document d'aide technique pour les normes, directives et objectifs associés à la qualité de l'eau potable en Ontario	4449f01

ontario.ca/eaupotable