

Ministry of the Environment,
Conservation & Parks

Ministère de l'Environnement, de la Protection de
la nature et des Parcs

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September 15, 2023

Sent by Email: jwhite@huronkinloss.com

The Corporation of the Township of Huron-Kinloss
21 Queen Street
P.O. Box 130
Ripley, Ontario
N0G 2R0

Attention: Jennifer White
Clerk

Dear Ms. White:

Re: 2023/2024 Inspection Report
Whitechurch Drinking Water System
Drinking Water Licence 087-103, Issue #5
Drinking Water Works Permit 087-203, Issue #4

Please find enclosed the Drinking Water System Inspection Report for the Whitechurch Drinking Water System (DWS# 220008863). This year's unannounced inspection was conducted on July 18, 2023.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of 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 councilors, 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 on the Drinking Water Ontario website at www.ontario.ca/drinkingwater.

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) 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.

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

IRR ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspectors' Annual Report. If you have any questions or concerns regarding the rating, please contact John Ritchie, District Manager, at (519) 377-1058.

Likewise, if you have any questions or concerns regarding this report, please call me at (519) 374-0231.

Yours truly,



Heather Lovely
Water Compliance Inspector
Phone: 519-374-0231
e-mail: heather.lovely@ontario.ca

Enclosure

ec: - Dr. Ian Arra, Medical Officer of Health, Grey-Bruce Health Unit
- Andrew Barton, Environmental Health Manager, Grey-Bruce Health Unit
- Phil Beard, General Manager, Maitland Valley Conservation Authority
- Gary Nicholson, Overall Responsible Operator, Veolia Water Canada
- Sarah Telford, Compliance Coordinator, Veolia Water Canada
- John Yungblut, Director of Public Works, Township of Huron-Kinloss
- John Ritchie, District Manager, Owen Sound District Office, Ministry of the Environment, Conservation & Parks

c: File SI-BR-HK-HU-540 (2023)

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WHITECHURCH DRINKING WATER SYSTEM
LOT:3, CONCESSION:1, GEOTOWNSHIP:KINLOSS,
HURON-KINLOSS, ON,
INSPECTION REPORT

System Number: 220008863

Entity: THE CORPORATION OF THE
TOWNSHIP OF HURON-KINLOSS
VEOLIA WATER CANADA INC.

Inspection Start Date: July 18, 2023

Inspection End Date: September 15, 2023

Inspected By: Heather Lovely

Badge #: 1680

Inspected By: John Ritchie

Badge #: 1157



(signature)

NON-COMPLIANCE

The following item(s) have been identified as non-compliance, based on a "No" response captured for a legislative question(s). For additional information on each question see the Inspection Details section of the report.

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

Item	Question	Compliance Response/Corrective Action(s)
NC-1	<p>Question ID: DWMR1096000</p> <p>Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?</p>	<p>Records did not confirm that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.</p> <p>By October 5, 2023, the operating authority shall provide the author of this report documentation that demonstrates operators have reviewed the standard operating procedure (SOP) to ensure compliance to O. Reg. 170/03 6-3 (1).</p>

RECOMMENDATIONS

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

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

INSPECTION DETAILS

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

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

Question ID	DWMR1001000	Question Type	Information
Legislative Requirement(s): Not Applicable			
Question: What was the scope of this inspection?			
Compliance Response(s)/Corrective Action(s)/Observation(s): <p>The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management practices.</p> <p>This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.</p> <p>This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.</p> <p>On July 18, 2023 Heather Lovely met with Overall Responsible Operator, Gary Nicholson, to inspect the Whitechurch Drinking Water System (DWS). The site inspection included the treatment system located in the pump house, two production wellheads and the diesel generator.</p> <p>The Whitechurch DWS is located in the Township of Huron-Kinloss and Veolia Water Canada is the operating authority of the drinking water system on behalf of the municipality (owner). The inspection period for this report is from the date of the last inspection, May 12, 2022, to the date of the current inspection, July 18, 2023.</p>			

Question ID	DWMR1000000	Question Type	Information
Legislative Requirement(s): Not Applicable			
Question: Does this drinking water system provide primary disinfection?			

Compliance Response(s)/Corrective Action(s)/Observation(s):

This drinking water system provides for both primary and secondary disinfection and distribution of water.

This DWS has one pump house and two production wells and uses sodium hypochlorite to provide primary disinfection of groundwater.

Question ID	DWMR1007000	Question Type	Legislative
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Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 1-2 | (1);

Question:

Is the owner maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials?

Compliance Response(s)/Corrective Action(s)/Observation(s):

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.

Since January 2010 there have been 1361 raw water samples tested for E. coli and 1362 samples tested total coliform for the two production wells. Of these samples there were four (4) samples that detected E. coli (0.3 % of the samples) and 54 samples that detected total coliform (4% of the samples).

Water Well Records (Well #1 - Well ID #1410462, Well #2 - Well ID #1410463) document that the annular space for both wells is filled with high solids bentonite. However, both wells are very close (less than 4 m) from an agricultural field that is actively farmed. This represents a potential risk to the source water of Whitechurch DWS. For that reason, Source Protection Program staff are in frequent contact with the farming operator.

Mary Lynn MacDonald, Risk Management Official for the Ausable Bayfield Maitland Valley Source Protection Region, confirmed that there is a Risk Management Plan (RMP) in place for the farmland adjacent to the Whitechurch DWS. The RMP is for pesticide application. There is no manure being applied to the property, and the Risk Management Plan also indicates that manure application is prohibited within 100 metres of the municipal well. Under the Province's Table of Drinking Water Threats, circumstances dictate that fertilizer application is not considered a significant threat to drinking water at this particular location, and therefore fertilizer is not part of the RMP.

- Since August of 2020, the community centre on the adjacent property has been taken down, thereby removing two of the previously identified risks to the Whitechurch DWS:
- Septic system for the community centre
- Heating oil tank (double-walled) in the basement of the community centre

Mary Lynn MacDonald confirmed with the municipality that the septic system had been decommissioned and noted the following regarding the generator fuel storage. "As far as the diesel in the backup generator, it is only about 100L so would not be considered a significant

drinking water threat even with the proposed changes to fuel threats from above ground fuel tanks."

It is worth noting that Operating Authority staff are aware of the threats to the Whitechurch source water and have copies of the Wellhead Protection Area (WHPA) maps from the Maitland Valley Source Protection Area – Updated Assessment Report on the wall in the pump house. The wellheads are secure and the land immediately around the wellheads is contoured to ensure surface water does not pool and potentially impact the source water.

Question ID	DWMR1009000	Question Type	Legislative
<p>Legislative Requirement(s): SDWA 31 (1);</p>			
<p>Question: Are measures in place to protect the groundwater and/or GUDI source in accordance with any MDWL and DWWP issued under Part V of the SDWA?</p>			
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): Measures were in place to protect the groundwater and/or GUDI source in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit issued under Part V of the SDWA.</p> <p>Conditions 16.2.8, 16.2.9 and 16.2.10 of Schedule B of Municipal Drinking Water Licence 087-105, Issue 5 prescribe that the Whitechurch DWS Operations and Maintenance Manual must include a well inspection and maintenance program that includes the following:</p> <ul style="list-style-type: none"> • An inspection schedule for all wells associated with the drinking water system, including all production wells, stand-by wells, test wells and monitoring wells; • Well inspection and maintenance procedures for the entire well structure of each well including all above and below grade well components; and • Remedial action plans for situations where an inspection indicates non-compliance with respect to regulatory requirements and/or risk to raw well water quality. <p>The Operating Authority is adhering to these conditions as specified under section WC-OM- 18 "Well Inspection / Maintenance" of the Whitechurch DWS Operations and Maintenance Manual. The procedure states that raw water (quality and quantity) trend data and well pump performance will be reviewed each year and a Licenced Well Contractor will be contacted to examine the well if a deterioration is noted (>25% compared to the historic average). This data was included in the "Whitechurch Annual and Summary Report – For the 2022 Operating Year", that was prepared by the Compliance Specialist and presented to the owner.</p> <p>A summary of the most recent below grade well inspections (BGWI) and due date for next BGWI, if there are no issues as per O&M Procedure WC-OM-18.</p>			

- Whitechurch Well 1 – drilled in 2003. BGWI completed 31-Aug-2022 by W.D. Hopper.
"Observations: The well is in reasonably good condition. A brushing/ air scrubbing of the casing area would allow a better view of the corrosion areas. This should be done within the next 5yrs." BGWI due again in 2032.
- Whitechurch Well 2 – drilled in 2003. BGWI completed 31-Aug-2022 by W.D. Hopper.
"Observations: The well casing area is in poor condition. A brushing/ air scrubbing, of the casing and air lifting of the entire well ins needed & would allow a better view of the corrosion areas. This should be done ASAP."

Whitechurch Well 2- 14-June-2023 – W.D. Hopper cleaned the well and prepared a Down Hole Video Report Post Cleaning with the following statements:

"Observations: The well casing area is in poor condition. As the brushing and air scrubbing has exposed many seriously corroded areas of the well casing.

Although no actual perforations of the steel casing were noted some are very deep and therefore the well has a very limited life remaining.

Recommendations: A more frequent inspection of this well may warranted."

Owner representative, Jane Eybergen, Public Works Administrative Assistant, stated the following via email: "As per the recommendations below, we will be decreasing the time between inspections. The next inspection estimated to be in 2-3 years."

Question ID	DWMR1014000	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?			
Compliance Response(s)/Corrective Action(s)/Observation(s): 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. Flow measurement conditions 2.1.1 and 2.1.2 (Schedule C) of the MDWL (087-105, Issue 5) state flow rate and volume of water into the treatment subsystem and into the distribution subsystem must be recorded daily. There are two separate raw water lines entering the pump house and both are equipped with a magnetic flow meter. There is no flow meter to measure volume of water sent to the distribution system as this DWS is a flow-through system.			

Question ID	DWMR1016000	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Is the owner in compliance with the conditions associated with maximum flow rate or the rated			

capacity conditions in the MDWL issued under Part V of the SDWA?

Compliance Response(s)/Corrective Action(s)/Observation(s):

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.

The DWWP (087-205, Issues 4) does not stipulate a maximum flow rate, however, the MDWL (087-105, Issue 5) specifies the rated capacity as 283 m3/day. There were no exceedances of the rated capacity within the inspection period with the greatest volume of water taken being 58.69 m3/day on November 20, 2022, from both Wells 1 & 2.

The Whitechurch Annual and Summary Report For the 2022 Operating Year states that the maximum water volume pumped from both production wells was 14.5% of the rated capacity, in December 2022. The average of all months in 2022 was 9.0% of the rated capacity.

Question ID	DWMR1018000	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.			
Equipment was installed as per Schedule A of DWWP (087-205, Issue 5) and there is no Schedule C in the DWWP.			
Note: Two of the five pressure tanks are going to be replaced with some plumbing reconfiguration to ensure there is a drain for each tank to enable pre-charge checks for each tank. The owner and OA are planning for a plumber to complete this work this fall.			

Question ID	DWMR1021000	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 2 documents were prepared in accordance with their Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s):			

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.

There was one (1) Form 2 completed within the inspection period for an ASCO Generator transfer switch replacement. The Form 2 was signed by owner representative, Gary Nicholson on July 29, 2023, after the work was completed on May 11, 2023. As per Condition 4.6.1 of Drinking Water Works Permit (087-205, Issue 4), Form 2s are to be completed prior to the modified or replaced components being placed into service.

However, this is not an issue of non-compliance given the part was replaced with a part that was "like or like", i.e., no change in the treatment equipment. Therefore, it is not a requirement to complete a Form 2 given the modification constitutes a "repair" as per condition 4.7.2 of Schedule B of the DWWP.

The operating authority is reminded of the requirement to complete Form 2s prior to the modified components being placed into service and to record all "like for like" repairs appropriately, i.e., documented in the logbook.

Question ID	DWMMR1025000	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
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?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All parts of the drinking water system were disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit.			
W.D. Hopper provided chlorination records for the following: <ul style="list-style-type: none"> • Well 1 below grade well inspection – 25-Aug-2022 • Well 2 brushing & air scrubbing plus grade well inspection – 8-Aug-2022 			
There were no watermain breaks within the inspection cycle.			

Question ID	DWMMR1023000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			
Question: Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued			

under Part V of the SDWA at all times that water was being supplied to consumers?

Compliance Response(s)/Corrective Action(s)/Observation(s):

Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under O. Reg. 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.

There were no (0) Adverse Water Quality Incidents within the inspection time frame and no indication that improperly disinfected water was distributed to consumers.

Question ID	DWMR1024000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			
Question: Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated as required?			
Compliance Response(s)/Corrective Action(s)/Observation(s): 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 free chlorine residual was measured each day, except for two days when the roads were closed due to severe weather. All measurements were greater than 0.05 mg/L, with the lowest free chlorine residual measured on 3-August-2022 at 0.75 mg/L during the inspection review time frame.			

Question ID	DWMR1034000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-2 (5); SDWA O. Reg. 170/03 7-2 (6);			
Question: Is the secondary disinfectant residual measured as required for the small municipal residential distribution system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The secondary disinfectant residual was measured as required for the small municipal residential distribution system. The free chlorine residual was measured each day, except for two days when the roads were closed due to severe weather. All measurements were greater than 0.05 mg/L, with the lowest			

free chlorine residual measured on 3-August-2022 at 0.75 mg/L during the inspection review time frame.

Question ID	DWWMR1030000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-2 (1); SDWA O. Reg. 170/03 7-2 (2);			
Question: Is primary disinfection chlorine monitoring being conducted at a location approved by MDWL and/or DWWP issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved?			
Compliance Response(s)/Corrective Action(s)/Observation(s): 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.			

Question ID	DWWMR1035000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10;			
Question: Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test. The Operating Authority maintains a SCADA logbook specific to recording when the trend data is reviewed and any data anomalies. Additional actions are also noted in the logbooks such as completing CT calculations for high flow rates. During the inspection review period the software program that summarizes the SCADA trend data could no longer be accessed by operating authority staff. This meant that trend data could be reviewed but summary reports could not be generated, e.g., Daily Reports, Incidents Reports or monthly SCADA summary reports. The owner contacted the consulting firm that maintains this software and they completed a software update over a couple of months time. At the time of the completion of this report, the consulting firm that manages the SCADA system was still working on the transition to the new software. Accurately generating Incident, Daily and Monthly summary SCADA reports is still problematic for the operators and they need to request these reports from the technology consulting firm.			

This issue has been ongoing since the end of the inspection review period, i.e., site inspection date, and will need to be further examined during the next inspection cycle.

In addition to the SCADA logbooks, SCADA login records (Excel spreadsheet), were reviewed to determine when operators were reviewing information and acknowledging alarm events. Records demonstrate that the SCADA trend data review interval was less than 72 hours throughout the inspection time frame.

The Operating Authority is reminded that while the date of the SCADA review is known from the stated review period, the date should be consistently recorded in the logbook.

Question ID	DWMR1038000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4;			
Question: Is continuous monitoring equipment that is being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format?			
Compliance Response(s)/Corrective Action(s)/Observation(s): 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. Continuous monitoring of free chlorine to achieve primary disinfection is recorded at a frequency of once every 2.5 minutes, which is more frequently than legislatively required.			

Question ID	DWMR1037000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1);			
Question: Are all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or MDWL or DWWP or order, equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6?			
Compliance Response(s)/Corrective Action(s)/Observation(s): 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.			

At the time of the inspection, the chlorine analyzer low alarm set point was 1.0 mg/L. In addition, the pre-contact and SCADA chlorine residual alarm set points were both 0.6 (low) and 0.5 (lolo- lockout) mg/L. Under maximum flow conditions a free chlorine residual of 0.47 mg/L is needed to meet primary disinfection requirements.

Question ID	DWMR1040000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10;			
Question: Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.			
The continuous analyzers were checked daily, calibrated weekly and cleaned monthly as per manufacturer's instructions and stated in the Operations Manual "Instrument Calibration Schedule- WC-OM-13".			

Question ID	DWMR1108000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1);			
Question: Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, an Order, MDWL, or DWWP issued under Part V, SDWA, has triggered an alarm or an automatic shut-off, did a qualified person respond in a timely manner and take appropriate actions?			
Compliance Response(s)/Corrective Action(s)/Observation(s): 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.			
During the inspection review period the software program that summarizes the SCADA measurements could no longer be accessed by operating authority staff. The owner contacted the consulting firm that maintains they completed a software update. However, this caused a delay in the completion of this inspection due to this update. Monthly SCADA summary reports for the duration of the software upgrade were provided to the ministry on 23-August-2023.			

The ORO provided a database export Excel file of the alarm history for each month of the inspection period. Likewise, there was a delay in obtaining the SCADA information from the server. The alarm history review included filtering each monthly spreadsheet for the Whitechurch alarm events and reviewing the respective logbook entries.

Operators responded to alarms in an appropriate and timely manner.

Question ID	DWMMR1099000	Question Type	Information
Legislative Requirement(s): Not Applicable			
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)?			
Compliance Response(s)/Corrective Action(s)/Observation(s): 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). There were no water quality results in which the measured parameter was greater than the respective ODWQS standard during the inspection period.			

Question ID	DWMMR1082000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 11-2 (1); SDWA O. Reg. 170/03 11-2 (2); SDWA O. Reg. 170/03 11-2 (6);			
Question: For SMR systems, are all microbiological water quality monitoring requirements for distribution samples prescribed by legislation being met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All microbiological water quality monitoring requirements prescribed by legislation for distribution samples in a small municipal residential system were being met. A distribution sample was taken each week (7 days) and tested for E. coli and total coliforms with the longest sampling interval of 8 days on three occasions during the inspection period. All samples within the inspection period resulted in no detection of E. coli or total coliforms. Each sample event also tested for microbial Heterotrophic Plate Count (HPC) with consistent results of 10 c.f.u./1mL.			

Question ID	DWMMR1096000	Question Type	Legislative
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Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 6-3 | (1);

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?

Compliance Response(s)/Corrective Action(s)/Observation(s):

Records did not confirm that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.

By October 5, 2023, the operating authority shall provide the author of this report documentation that demonstrates operators have reviewed the standard operating procedure (SOP) to ensure compliance to O. Reg. 170/03 6-3 (1).

The laboratory Certificates of Analyses and sampling Chain of Custody forms were reviewed for the inspection period and on July 12, 2022, the free chlorine residual was not measured for the treated water or distribution water sample that was analyzed for microbiological parameters (E. coli and total coliforms).

Question ID	DWMR1084000	Question Type	Legislative
<p>Legislative Requirement(s): SDWA O. Reg. 170/03 13-2;</p>			
<p>Question: Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?</p>			
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.</p> <p>The Operating Authority sampled the O. Reg 170/03 Schedule 23 inorganic parameters most recently on 10-October-2017 and 12-September-2022, which is within the required sampling interval for a Small Municipal Residential DWS of every 60 months. All September 2022 inorganic parameter results, excluding barium, were below the reportable threshold (0.08% - 10.0% maximum allowable concentration).</p> <p>Barium is also listed under O. Reg 170/03 Schedule 23, but quarterly sampling is required under Municipal Drinking Water License (MDWL) 087-105, Issue 5. Schedule 23 parameters are next due to be sampled in September 2027. Barium sampling will continue to be required quarterly under the MDWL.</p>			

Question ID	DWMR1085000	Question Type	Legislative
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Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-4 | (1); SDWA | O. Reg. 170/03 | 13-4 | (2); SDWA | O. Reg. 170/03 | 13-4 | (3);

Question:

Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?

Compliance Response(s)/Corrective Action(s)/Observation(s):

All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

The Operating Authority sampled the O. Reg 170/03 Schedule 24 organic parameters most recently on 10-October-2017 and 12-September-2022, which is within the required sampling interval for a Small Municipal Residential DWS of every 60 months. All September 2022 organic parameter results were below the reportable threshold (0.009 to 40% maximum allowable concentration). Schedule 24 parameters are due to be sampled again in September 2027.

Question ID	DWMMR1093000	Question Type	Legislative
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Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-5 | (1); SDWA | O. Reg. 170/03 | 13-5 | (2);

Question:

If the owner is required to conduct sampling under Schedule 13 of O. Reg. 170/03, have they increased the frequency of monitoring for any Schedule 13-2 or 13-4 parameter(s) as a result of having exceeded half the value of an applicable ODWQS?

Compliance Response(s)/Corrective Action(s)/Observation(s):

The owner was required to increase frequency of monitoring as a result of having exceeded half the value of an applicable ODWQS of a Schedule 13-2 or 13-4 parameter(s) and the increased monitoring was conducted.

Naturally occurring barium consistently yields test results greater than half of the standard prescribed in Schedule 2 of the Ontario Drinking Water Quality Standards (1 mg/L). Between January 1, 2010, and May 9, 2023 the average barium concentration was 0.904 mg/L, or 90% of MAC (n=58). Quarterly sampling of barium is required as a condition of the MDWL (087-105, Issue 5).

Question ID	DWMMR1086000	Question Type	Legislative
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Legislative Requirement(s):

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);

Question:

Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?

Compliance Response(s)/Corrective Action(s)/Observation(s):

All haloacetic acid water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.

Total Haloacetic Acids (HAAs) were sampled quarterly throughout the inspection review period with sampling events occurring between 84 and 98 days. This is within the legislative requirements (60-120 days). Typically, HAAs were sampled close to the pump houses, as per the requirement to sample where there is a higher likelihood of elevated HAAs. HAAs generally form at the beginning of the distribution system or may be found just past the chlorination point if the right humic acids are present.

The four (4) samples taken had consistent results of 5.3 ug/L. The standard for Haloacetic Acids (80 ug/L) is expressed as a Running Annual Average (RAA). The RAA for this facility at the time of the inspection was 5.30 ug/L.

Question ID	DWMR1087000	Question Type	Legislative
<p>Legislative Requirement(s): 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);</p>			
<p>Question: Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?</p>			
<p>Compliance Response(s)/Corrective Action(s)/Observation(s): All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.</p> <p>Based on previous trihalomethanes (THMs) sampling results, the owner of the Whitechurch DWS is eligible for a THM sampling exemption under O. Reg. 170/03 Schedule 13-6 (4). Requirements for this exemption include all THM concentrations taken within 12 consecutive calendar quarters from the same raw water source being less than 0.050 mg/L and no alterations to the Small Municipal Residential DWS. This requirement was met based on THM sampling between January 2017 and December 2019, in which results ranged from 0.015 to 0.041 mg/L.</p> <p>Under this exemption the owner of the drinking water system may cease THM sampling for eight consecutive calendar quarters, i.e., until the first quarter (January to March) 2022. Then under O. Reg. 170/03 Schedule 13-6 (5), the owner shall resume THM sampling for four (4) consecutive quarters.</p>			

THMs were sampled during the four quarters of 2022 with results ranging from 0.016 to 0.03 mg/L. Since the aforementioned conditions have been met once again, THM sampling may cease for eight (8) consecutive quarters once again. However, THM sampling of the Whitechurch distribution system has continued to occur each quarter with the most results of 0.017 and 0.023 mg/L from samples taken on February 14, 2023, and May 9, 2023, respectively.

Question ID	DWMR1088000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-7;			
Question: Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency.			
Nitrates and nitrites are required to be sampled every three months. Nitrates and nitrites were sampled at the pump house with sampling events occurring between 84 and 98 days. This is within the legislative requirements (60-120 days).			
Nitrite results were 0.003 mg/L (0.03%MAC) and 0.314 (31% MAC). Nitrate results were consistently (n=4) below the Minimum Detection Limit of the lab test and recorded as 0.006 mg/L (0.06%MAC).			

Question ID	DWMR1089000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-8;			
Question: Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.			
The Operating Authority sampled sodium most recently on 09-January-2018 and 31-January-2023, which is within the required sampling interval 60 months. The sodium result from 2023 was 16.8 mg/L. This sodium concentration is less than the reportable threshold of 20 mg/L. Sodium will be due to be sampled again in January 2028.			

Question ID	DWMMR1090000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-9;			
Question: Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Fluoride sampling is required once every 60 months. Most recently fluoride was sampled on November 18, 2019 with a result of 1.09 mg/L, below the ODQWS of 1.5 mg/L. Fluoride sampling is due again in November 2024.			

Question ID	DWMMR1094000	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Are all water quality monitoring requirements imposed by the MDWL and DWWP being met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were being met. Additional water quality monitoring has been conducted as per Condition 5.1 of MDWL 087-105, (Issue 5), specifically quarterly sampling of barium at the point of entrance to the distribution system. During the inspection period, quarterly samples for barium had results ranging from 0.679 to 0.895 mg/L (n=5). These results do not exceed the ODWQS of 1 mg/L (1000 ug/) but are 68% to 89% of the threshold limit. Schedule D of the MDWL provides the following regulatory relief. 2.0 Other Regulatory Relief 2.1 Barium Notwithstanding the provisions of O. Reg. 170/03 and subject to condition 2.2, if a result of sampling for barium required by the Licence, Table 5: Drinking Water Health Related Parameters exceeds the O. Reg. 169/03 Ontario Drinking Water Quality Standard for Barium the Owner is not required to make a report under section 18 of the Act. 2.2 Annual Barium Reporting to Health Unit Barium sample reports shall be forwarded to the Grey Bruce Health Unit for review annually. The Owner shall take such steps as directed by the Medical Officer of Health as a result of the findings of the report. The annual Whitechurch barium report was submitted to the Grey Bruce Health Unit by the			

Operating Authority's Compliance Specialist on November 25, 2022, and the Medical Officer of Health did not assign additional steps for the owner to follow.

Question ID	DWMR1113000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 10.1 (3);			
Question: Have all changes to the system registration information been provided to the Ministry within ten (10) days of the change?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All changes to the system registration information were provided within ten (10) days of the change.			

Question ID	DWMR1059000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 28;			
Question: Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.			

Question ID	DWMR1060000	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?			
Compliance Response(s)/Corrective Action(s)/Observation(s): 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	DWMR1061000	Question Type	Legislative
Legislative Requirement(s): 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);

Question:

Are logbooks properly maintained and contain the required information?

Compliance Response(s)/Corrective Action(s)/Observation(s):

Logbooks were properly maintained and contained the required information.

Logbooks are properly maintained and include specified daily checks, alarm summary, work order section as well as daily events and observations.

Question ID	DWMMR1062000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-5;			
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?			
Compliance Response(s)/Corrective Action(s)/Observation(s): 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. There were six (6) operators who do most of the operational checks and sampling for the Whitechurch DWS. All of these operators had current certification.			

Question ID	DWMMR1071000	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Has the owner provided security measures to protect components of the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had provided security measures to protect components of the drinking water system. The pump house is attended daily by an operator, has appropriate signage, keyed lock entry and generator is in locked fenced area immediately adjacent to the pump house.			

Question ID	DWMMR1073000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 23 (1);			
Question: Has the overall responsible operator been designated for all subsystems which comprise the			

drinking water system?

Compliance Response(s)/Corrective Action(s)/Observation(s):

The overall responsible operator had been designated for each subsystem.

The Overall Responsible Operator during the inspection period was Gary Nicholson with Veolia Water Canada. Steve Walmsley fulfills ORO duties when Gary is unavailable. The ORO for each day is noted in the pump house logbooks.

Question ID	DWMR1074000	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 128/04 25 (1);			
Question:			
Have operators-in-charge been designated for all subsystems which comprise the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s):			
Operators-in-charge had been designated for all subsystems which comprise the drinking water system.			
The Operator-In-Charge (OIC) is designated for each day and documented in the pump house logbooks			

Question ID	DWMR1075000	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 128/04 22;			
Question:			
Do all operators possess the required certification?			
Compliance Response(s)/Corrective Action(s)/Observation(s):			
All operators possessed the required certification.			
The Whitechurch DWS is a small municipal residential system with a groundwater source and is therefore considered a limited groundwater subsystem under O. Reg. 128/04. Persons operating the Whitechurch DWS should hold, or be deemed to hold, a limited groundwater subsystem operator's certificate. During the inspection period, there were six (6) operators who conducted the operational checks and sampling for the Whitechurch DWS. All of these operators had sufficient and current certification.			
Although there were six (6) operators who performed the operational checks and sampling during the inspection period, a couple of these operators no longer work for the operating authority. Another operator was hired in May 2023.			

Question ID	DWMR1076000	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			
Question: Do only certified operators make adjustments to the treatment equipment?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Only certified operators made adjustments to the treatment equipment.			

Stakeholder Appendix

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.



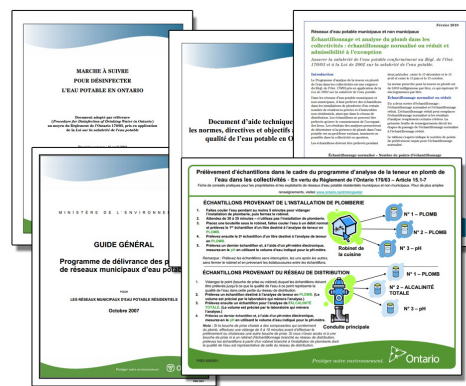
PUBLICATION TITLE	PUBLICATION NUMBER
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	7889e01
FORMS: Drinking Water System Profile Information, Laboratory Services Notification, Adverse Test Result Notification Form	7419e, 5387e, 4444e
Procedure for Disinfection of Drinking 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