

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.: 519 826-4255
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.: 519 826-4255
Télé.: 519 826-4286



September 14th, 2022

Mr. Mathew Aston
Director of Public Works
The Township of Wellington North
PO Box 125
7490 Sideroad 7W
Kenilworth, Ontario
N0G 2E0

Dear Mr. Aston,

SUBJECT : 2022 MECP Inspection Report – Arthur Well Supply (DWS # 220000040)

Please find enclosed the Ministry of the Environment, Conservation and Parks ('MECP' or the 'Ministry') Inspection Report for the inspection of the Arthur WS, which was recently conducted.

The primary focus of this inspection was to confirm compliance with MECP legislation and control documents, as well as conformance with Ministry drinking water related policies for the inspection period. The Ministry is implementing a rigorous and comprehensive approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as water system management practices.

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 and risk experts. The Inspection Summary Rating Record (IRR) provides the Ministry, the system owner and the associated 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 find a copy of the IRR for this inspection, in the Appendices of this report.

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 councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority.

2022 Arthur DWS Inspection Report
Page 2.

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:

<https://www.ontario.ca/page/taking-care-your-drinking-water-guide-members-municipal-councils>

If you have any questions regarding any other aspects of this report, please feel free to contact myself or the Drinking Water Supervisor (Lisa Williamson) at this office at (519) 546-9301.

Thankyou.

Yours truly,

A handwritten signature in black ink, appearing to read 'Rick Neubrand', written in a cursive style.

Rick Neubrand
Senior Environmental Officer / Inspector
Ministry of the Environment, Conservation and Parks
Drinking Water and Environmental Compliance Division
Guelph District Office

Encl: Reports (1)

CC : Janet Ivey – GRCA
: Phil Wong –WDGHU
: Sara McDougall – TWN
: Corey Schmidt - TWN



ARTHUR DRINKING WATER SYSTEM
109 WELLS ST, WELLINGTON NORTH, ON, N0G 1A0
Inspection Report

System Number: 220000040
Entity: CORPORATION OF THE COUNTY
OF WELLINGTON
Inspection Start Date: 07/25/2022
Inspection End Date: 08/29/2022
Inspected By: Rick Neubrand
Badge #: 773
Inspected By: Lisa Williamson
Badge #: 1205



(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 | MRDW1116001 | Question Type | BMP |
| Question: Were the inspection questions sufficient to address other identified best practice issues? | | | |
| Legislative Requirement | Not Applicable | | |
| Observation/Corrective Action(s) | | | |
| <p>The following issues were also noted during the inspection: 1.) During a previous inspection, the owner reported that an adjacent landowner had applied commercial fertilizer and treated corn seed within 100 m of wells 8A and 8B. This is within the WHPA- A groundwater protection zone for the wells and is contrary to the Nutrient Management Act. The owner also provided documentation which indicated that the local Ministry Agricultural Compliance Officer had followed up with the adjacent farmer and stopped the action.</p> <p>During this inspection, corn crops were noted just north of the Well 7 pumphouse. Although, the owner was unaware of any fertilizer or nutrient application activities in this area, the Risk Management Official (RMO - for the Township of Wellington North) advised that fertilizer application is not a significant drinking water threat for Well 7B and therefore is not subject to a prohibition like manure spreading. The Risk Management Inspector (RMI) conducts inspections to enforce the manure prohibition in place within 100 metres of this well. Based on these inspections there was no evidence of manure spreading in 2022 at the property just north of the Well 7 pumphouse. It is recommended that the owner continue to monitor agricultural activities on lands adjacent to their wells, and report any improper land applications to the Ministry.</p> <p>2.) On page 5 of the 2019 Annual Report of the PTTW, it is stated that: "The O'Donnell domestic well responds significantly to operation of well 7B but it is located south of the Arthur well 7B wellhead protection area. We would expect the wellhead protection area to include this area. Monitoring well WN- MW1/00 (DO) responds significantly to the operation of Wells 8A and 8B but is shown in the capture area for Well 7B. Similarly we would expect that the wellhead protection area for wells 8A and 8B would include this area." It is recommended this be considered the next time the source protection plans are revised.</p> | | | |

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. This inspection is an assessment of the Town of Arthur's drinking water system (DWS) and occurred on Aug 18, 2022. This inspection included an on-site physical inspection of facilities, as well as a review of site logbooks, computer monitoring data, and sampling data.</p> <p>The Town of Arthur is a small rural community with a population of approximately 2628 people. It is located approximately 36 km north of the City of Guelph, and 61 km northwest of the City of Brampton.</p> <p>The DWS for the Town of Arthur is comprised of three wells, two pumphouses, and two water towers. Treatment consists of chlorination for disinfection and iron sequestration.</p> <p>The review period for this inspection is from September 23, 2021 to August 18, 2022</p> | | | |

| 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 both primary and secondary disinfection and distribution of water. Primary disinfection is provided through the usage of chlorination (sodium hypochlorite injection). Sodium silicate injection is used for iron sequestration. | |

| | | | |
|--|------------------|----------------------|-------------|
| 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. No significant changes in equipment have occurred since the last inspection. | | | |

| | | | |
|---|------------------|----------------------|-------------|
| 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. Two form 1s were prepared since last inspection for the construction of new and replacement of existing watermains. | | | |

| | | | |
|---|-------------|----------------------|-------------|
| Question ID | MRDW1021001 | Question Type | Legislative |
| 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? | |
| Legislative Requirement | SDWA 31 (1); |
| Observation | |
| 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. One form 2 was prepared since the last inspection for the replacement of a free chlorine residual (FCR) analyzer unit. | |

| | | | |
|---|------------------|----------------------|-------------|
| 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. The Township has advised that all engineers / developers must comply with the Township's Municipal Servicing Standards, which states the following: | | | |
| "Developer's Engineer must comply with the requirements of the Ontario Safe Drinking Water Act (SDWA) and all applicable regulations made in accordance to the act, including but not limited to the Drinking Water Works Permits (DWWP) and the Municipal Drinking Water Licence (MDWL). DWWP and MDWL are available from the Township's Water Department and it is the responsibility of the developer's engineer to obtain copies as necessary." | | | |

| | | | |
|--|------------------|----------------------|-------------|
| 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 | MRDW1024001 | Question Type | Legislative |
| Question: Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated as required? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 1-2 (2); | | |
| Observation Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined. | | | |

| | | | |
|--|---------------------------------------|----------------------|-------------|
| Question ID | MRDW1038001 | Question Type | Legislative |
| 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? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 6-5 (1)1-4; | | |
| Observation 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. In reviewing the site's Supervisory Control and Data Acquisition (SCADA) data, the owner provided backup data from on-site historians for any omissions from broadcast channel data as well. Regular SCADA data was provided in 5 minute intervals. | | | |

| | | | |
|--|--|----------------------|-------------|
| Question ID | MRDW1035001 | Question Type | Legislative |
| Question: Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; | | |
| Observation | | | |

Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.

| | | | |
|---|---|----------------------|-------------|
| Question ID | MRDW1037001 | Question Type | Legislative |
| 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? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1); | | |
| Observation | | | |
| 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. Alarms are set for FCR levels (well ahead of minimum limits of 0.5 mg/L - proper disinfection) on both the pre-contact piping (operational analyzers) and post-contact piping (legislative analyzers), for optimum response ability. The well pumps are set to lock out if the free chlorine residual levels drop below the low-low setpoint level of 0.65 mg/L at the post-contact chlorine analyzers. | | | |

| | | | |
|---|--|----------------------|-------------|
| Question ID | MRDW1040000 | Question Type | Legislative |
| Question: | | | |
| Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; | | |
| Observation | | | |
| All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation. Portable colourimeters are used to calibrate the continuous FCR analyzers. Portable colourimeters are professionally calibrated annually and were last calibrated on February 8, 2022. The online analyzers were last professionally checked on January 25, 2022. Certificates were provided for these assessments. | | | |

| | | | |
|--------------------|-------------|----------------------|-------------|
| Question ID | MRDW1108001 | Question Type | Legislative |
|--------------------|-------------|----------------------|-------------|

| | |
|--|---|
| 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? | |
| Legislative Requirement | SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1); |
| Observation | |
| 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. Operators kept detailed notes in logbooks which explained alarm notifications and other events / anomalies in the DWS. | |

| | | | |
|--|---|----------------------|-------------|
| Question ID | MRDW1033001 | Question Type | Legislative |
| Question: | | | |
| Is the secondary disinfectant residual measured as required for the large municipal residential distribution system? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 7-2 (3); SDWA O. Reg. 170/03 7-2 (4); | | |
| Observation | | | |
| The secondary disinfectant residual was measured as required for the large municipal residential distribution system. Distribution system chlorine residuals were measured on a daily basis during the inspection review period. | | | |

| | | | |
|--|----------------|----------------------|-------------|
| 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. | | | |

| | | | |
|--|------------------------------------|----------------------|-------------|
| 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. HAAs were sampled in the distribution system on the following dates: - August 16, 2021 - November 8, 2021 - February 14, 2022 and May 9, 2022. | | | |

There were no exceedances of this parameter. This sample parameter is required to be sampled quarterly.

| | | | |
|---|---|----------------------|-------------|
| 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. THMs were sampled in the distribution system on the following dates: - August 16, 2021 - November 8, 2021 - February 14, 2022 and May 9, 2022. There were no exceedances of this parameter. The latest annual running average (ARA) was 19.40 ug/L. This sample parameter is required to be sampled every three months. | | | |

| | | | |
|---|-----------------------------|----------------------|-------------|
| 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. Legibility of entries has improved since the last inspection. | | | |

| | | | |
|---|------------------------------|----------------------|-------------|
| 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. Pumphouses are well lit and have remote notification security systems in place. Operators make routine visits to pumphouses at differing times, which adds to better security measures.

| | | | |
|---|-----------------------------------|----------------------|-------------|
| 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 Manager, Environmental & Development Services is permanently designated as the ORO for the Township's Drinking Water Systems. Other Operators may be required to act in the absence of the Manager and a memo will be sent out to notify staff. | | | |

| | | | |
|---|-----------------------------------|----------------------|-------------|
| 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. The operator that completes the daily well check is designated the OIC for that facility during regular working hours. The on-call operator is designated the OIC after regular working hours and on weekends. Operators are on-call for one week on a rotational basis. | | | |

| | | | |
|--|-----------------------------|----------------------|-------------|
| 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. | | | |

| |
|--|
| |
|--|

| | | | |
|--|------------------------------------|----------------------|-------------|
| Question ID | MRDW1076001 | Question Type | Legislative |
| Question: Do only certified operators make adjustments to the treatment equipment? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 1-2 (2); | | |
| Observation Only certified operators made adjustments to the treatment equipment. | | | |

| | | | |
|--|----------------|----------------------|-----|
| Question ID | MRDW1116001 | Question Type | BMP |
| Question: Were the inspection questions sufficient to address other identified best practice issues? | | | |
| Legislative Requirement | Not Applicable | | |
| Observation <p>The following issues were also noted during the inspection: 1.) During a previous inspection, the owner reported that an adjacent landowner had applied commercial fertilizer and treated corn seed within 100 m of wells 8A and 8B. This is within the WHPA-A groundwater protection zone for the wells and is contrary to the Nutrient Management Act. The owner also provided documentation which indicated that the local Ministry Agricultural Compliance Officer had followed up with the adjacent farmer and stopped the action.</p> <p>During this inspection, corn crops were noted just north of the Well 7 pumphouse. Although, the owner was unaware of any fertilizer or nutrient application activities in this area, the Risk Management Official (RMO - for the Township of Wellington North) advised that fertilizer application is not a significant drinking water threat for Well 7B and therefore is not subject to a prohibition like manure spreading. The Risk Management Inspector (RMI) conducts inspections to enforce the manure prohibition in place within 100 metres of this well. Based on these inspections there was no evidence of manure spreading in 2022 at the property just north of the Well 7 pumphouse. It is recommended that the owner continue to monitor agricultural activities on lands adjacent to their wells, and report any improper land applications to the Ministry.</p> <p>2.) On page 5 of the 2019 Annual Report of the PTTW, it is stated that: "The O'Donnell domestic well responds significantly to operation of well 7B but it is located south of the Arthur well 7B wellhead protection area. We would expect the wellhead protection area to include this area. Monitoring well WN- MW1/00 (DO) responds significantly to the operation of Wells 8A and 8B but is shown in the capture area for Well 7B. Similarly we would expect that the wellhead protection area for wells 8A and 8B would include this area." It is recommended this be considered the next time the source protection plans are revised.</p> | | | |

| |
|--|
| |
|--|

| | | | |
|--|------------------------------------|----------------------|-------------|
| Question ID | MRDW1007001 | Question Type | Legislative |
| 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? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 1-2 (1); | | |
| Observation | | | |
| <p>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. According to Water Well Record #6712921, the annular space for Well 7B was filled with cement grout and bentonite from ground level to a depth of 40 feet. According to Water Well Records #6714775 and 6714776, the annular spaces for Well 8A and Well 8B were each filled with cement grout from ground level to a depth of 183 feet.</p> <p>Sections 16.2.7 - 16.2.9 of Schedule B in the MDWL requires that an inspection schedule for all wells associated with the drinking water system be included in the operations and maintenance manual. There must be inspection and maintenance procedures for the entire well structure of each well including all above and below grade 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> <p>The Township of Wellington-North has established a well inspection program that includes inspections of the production wells on an annual basis. Also, a detailed assessment of the wells, including below grade components, is set to be scheduled approximately every 10 years, if feasible.</p> <p>With respect to next below grade (video) inspections, the owner reported that:</p> <ul style="list-style-type: none"> - Well 7 was last inspected on Oct 15, 2019. - Well 8A was last inspected November 13, 2013. - Well 8B was last inspected on October 3, 2013. <p>No significant concerns were noted.</p> | | | |

| | | | |
|---|------------------|----------------------|-------------|
| Question ID | MRDW1009001 | Question Type | Legislative |
| 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? | | | |
| Legislative Requirement | SDWA 31 (1); | | |
| Observation | | | |

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. During a previous inspection, the owner reported that an adjacent landowner had applied commercial fertilizer and treated corn seed within 100 m of wells 8A and 8B. This is within the WHPA-A groundwater protection zone for the wells and is contrary to the Nutrient Management Act. The owner also provided documentation which indicated that the local Ministry Agricultural Compliance Officer had followed up with the adjacent farmer and stopped the action.

During this inspection, corn crops were noted just north of the Well 7 pumphouse. Although, the owner was unaware of any fertilizer or nutrient application activities in this area, the Risk Management Official (RMO - for the Township of Wellington North) advised that fertilizer application is not a significant drinking water threat for Well 7B and therefore is not subject to a prohibition like manure spreading. The Risk Management Inspector (RMI) conducts inspections to enforce the manure prohibition in place within 100 metres of this well. Based on these inspections there was no evidence of manure spreading in 2022 at the property just north of the Well 7 pumphouse. It is recommended that the owner continue to monitor agricultural activities on lands adjacent to their wells, and report any improper land applications to the Ministry.

For reporting purposes, the Township of Wellington North is subject to two Source Protection Plans (based on watershed or Conservation Authority boundaries): Grand River Plan and the Saugeen Valley, Grey Sauble, Northern Bruce Peninsula Plan (Saugeen Valley). Although the Ausable Bayfield Maitland Valley (ABMV - Maitland Valley) Plan also encompasses part of the municipality, there are no reporting requirements associated with that Plan for the Township. In 2021, all Source Protection Plans were in effect.

On page 5 of the 2019 Annual Report of the PTTW, it is stated that: "The O'Donnell domestic well responds significantly to operation of well 7B but it is located south of the Arthur well 7B wellhead protection area. We would expect the wellhead protection area to include this area. Monitoring well WN - MW1/00 (DO) responds significantly to the operation of Wells 8A and 8B but is shown in the capture area for Well 7B. Similarly we would expect that the wellhead protection area for wells 8A and 8B would include this area." It is recommended this be considered the next time the source protection plans are revised.

| | | | |
|---|------------------|----------------------|-------------|
| Question ID | MRDW1014001 | Question Type | Legislative |
| Question: | | | |
| Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA? | | | |
| Legislative Requirement | SDWA 31 (1); | | |
| Observation | | | |

There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA. Section 2.1 of Schedule C in the MDWL outlines the requirements for flow measurement and recording. For this system, continuous flow measurement and recording shall be undertaken for the flow rate (L/s) and daily volume (m³/day) of treated water that flows from the treatment subsystem into the distribution system, as well as water that flows into the treatment subsystem. For this system, each well is equipped with a flow meter that in essence serves as a treated flow meter due to the treatment occurring within contact piping rather than a reservoir.

| | | | |
|--|------------------|----------------------|-------------|
| Question ID | MRDW1016001 | Question Type | Legislative |
| 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? | | | |
| Legislative Requirement | SDWA 31 (1); | | |
| Observation | | | |
| <p>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. Schedule C, Section 1.1 of the MDWL dictates a rated capacity of 1,961 m³/day for Well Pumphouse 7, and 2,255 m³/day for Well Pumphouse 8. Records provided indicate that the maximum daily flow volumes for 2021 were;</p> <ul style="list-style-type: none"> - Well 7 was 975 m³ in May 2021, which is 49.7% of approved volume, - Well 8a was 785 m³ in Aug 2021, which is 34.8% of approved volume, <p>and</p> <ul style="list-style-type: none"> - Well 8b was 777 m³ in March 2021, which is 34.4% of approved volume. <p>Flow rates for these wells were not exceeded during the inspection review period, except for minor periods involving maintenance of the DWS. Flow rate percentages (of approved rates) ranged from 81.0% to 89.6% in all three wells.</p> | | | |

| | | | |
|---|------------------------------------|----------------------|-------------|
| Question ID | MRDW1023001 | Question Type | Legislative |
| 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? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 1-2 (2); | | |
| Observation | | | |
| 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. The Arthur Drinking Water System obtains water from ground water sources. The treatment system consists of disinfection using sodium hypochlorite and is capable of achieving an overall performance that provides, at a minimum, 2-log (99%) removal or inactivation of viruses prior to the first consumer.

The minimum required CT value for this system has been determined to be 4 mg/L-min, and a free chlorine residual of 0.50 mg/L has been deemed to be the minimum level required to achieve the required CT at both the 7B and 8A/8B pumphouses.

Records provided for the inspection period indicate that proper disinfection was achieved at all times water was being supplied to consumers.

| | | | |
|--|---|----------------------|-------------|
| Question ID | MRDW1030000 | Question Type | Legislative |
| 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? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 7-2 (1); SDWA O. Reg. 170/03 7-2 (2); | | |
| Observation | | | |
| Primary disinfection chlorine monitoring was conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved. Both pumphouses have both pre-chlorination and post chlorination pumps and continuous FCR analyzers. The post chlorination analyzer takes water for sampling at the ends of the contact mains. | | | |

| | | | |
|---|-------------------------------|----------------------|-------------|
| Question ID | MRDW1083001 | Question Type | Legislative |
| Question: | | | |
| For LMR systems, are all microbiological water quality monitoring requirements for treated samples being met? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 10-3; | | |
| Observation | | | |
| All microbiological water quality monitoring requirements prescribed by legislation for treated samples were being met. | | | |

| | | | |
|--|-------------------------------|----------------------|-------------|
| Question ID | MRDW1084001 | Question Type | Legislative |
| Question: Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 13-2; | | |
| Observation | | | |
| All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Inorganics were last sampled for on August 8, 2018 for Pumphouse 7, and November 16, 2020 for Pumphouse 8. Sampling for these parameters were undertaken again at both pumphouses on Aug 23, 2021 to get a common sampling date for both pumphouses. These sample parameters are required to be sampled every 36 months. | | | |

| | | | |
|--|-------------------------------|----------------------|-------------|
| Question ID | MRDW1088000 | Question Type | Legislative |
| Question: Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 13-7; | | |
| Observation | | | |
| All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS. Nitrates / nitrites were sampled in the distribution system on the following dates: - August 16, 2021 - November 8, 2021 - February 14, 2022 and May 9, 2022. There were no exceedances of this parameter. These sample parameters are required to be sampled quarterly. | | | |

| | | | |
|---|-------------------------------|----------------------|-------------|
| Question ID | MRDW1089000 | Question Type | Legislative |
| Question: Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 13-8; | | |

| |
|--|
| Observation |
| All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Sodium sampling was conducted for Pumphouse 7 on September 10, 2018 and results exceeded the 20 mg/L reportable limit (36.6 mg/L). An adverse water quality incident (AWQI) was reported (#114425), with resampling results of Sept 18, 2018 confirming the levels were greater than 20 mg/L (also 36.6 mg/L). Sodium sampling for Pumphouse 8 was conducted on November 9, 2015 (results slightly higher than 20 mg/L) and again on November 16, 2020 at 22.4 mg/L. This was not reported as elevated sodium for the DWS as elevated sodium levels had been already reported within the last 5 years. This sample parameter is required to be sampled every 60 months. |

| | | | |
|--|-------------------------------|----------------------|-------------|
| Question ID | MRDW1090000 | Question Type | Legislative |
| Question: | | | |
| Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 13-9; | | |
| Observation | | | |
| All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Sampling for fluoride at Pumphouse 7 was last conducted on September 10, 2018. Test results were 1.30 mg/L. Sampling for fluoride at Pumphouse 8 was last conducted on November 16, 2020 at 0.35 mg/L. The established drinking water standard for fluoride of 1.5 mg/L. This sample parameter is required to be sampled every 60 months. | | | |

| | | | |
|--|---|----------------------|-------------|
| Question ID | MRDW1085001 | Question Type | Legislative |
| Question: | | | |
| Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency? | | | |
| Legislative Requirement | SDWA O. Reg. 170/03 13-4 (1); SDWA O. Reg. 170/03 13-4 (2); SDWA O. Reg. 170/03 13-4 (3); | | |
| Observation | | | |
| All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Organics were previously sampled for on August 8, 2018 for Pumphouse 7, and November 16, 2020 for Pumphouse 8. Sampling for these parameters were undertaken again at both pumphouses on Aug 23, 2021 to get a common sampling date for both pumphouses. These sample parameters are required to be sampled every 36 months. | | | |

DWS – Stakeholder Guidance Material Reference Sheet

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 |