Ministry of the Environment, Conservation and Parks

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Ontario

August 21, 2023

Tracey Vaughan
CAO
The Corporation of the Town of Cobourg
55 King Street
Cobourg, ON K9A 2M2

Dear Ms. Vaughan,

Re: Cobourg Drinking Water System No. 220000825
2023-2024 Compliance Inspection Report

Enclosed is the report of the 2023-2024 inspection of the Cobourg DWS and the corresponding Inspection Rating Report (IRR) and Risk Methodology document.

This report provides an assessment of compliance and conformance based on observations and information available during the inspection review period only. As always, please refer to the applicable legislative requirements, permissions, policies, guidelines and best management practices to clarify your specific obligations.

Please note that one (1) instance of non-compliance was identified during the inspection and require the submission of information or plans to my attention. Please forward your written response to the Action Required to the signed Provincial Officer at the Peterborough District Office of the Ministry of Environment by September 16, 2023.

Please note that "Actions Required" are linked to incidents of non-compliance with regulatory requirements contained within an Act, a Regulation, or site-specific approvals, licenses, permits, orders, or instructions. Such violations could result in the issuance of mandatory abatement instruments including Orders, tickets, penalties, or referrals to the ministry's Investigations and Enforcement Branch.

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 Councils" on the Drinking Water Ontario website at https://www.ontario.ca/environment-and-energy/taking-care-your-drinking-water-guide-members-municipal-councils.

The IRR is a summarized quantitative measure of the drinking water system's annual inspection and is published in the Ministry's Chief Drinking Water Inspector's Annual Report. The Risk Methodology document describes the risk rating methodology which has been applied to the findings of the Ministry's municipal residential drinking water system inspection results.

If you have any questions or concerns regarding the rating, please feel free to contact me or Water Supervisor (A) Brad Jackson at 705-768-9245. I would be pleased to answer any questions or provide additional clarification.

Sincerely,

Viktoria Light
Provincial Officer #1100
Drinking Water Program Inspector
Eastern Region
Ministry of Environment, Conservation and Parks
Enclosure (1)

c: Laurie Wills, Director of Public Works, The Town of Cobourg
Larry Spyrka, Manager of Water Capital Projects, Lakefront Utility Services Inc.
Adam Taggart, Supervisor, Distribution and Systems, Lakefront Utility Services Inc.
Dr. Natalie Bocking, Medical Officer of Health, Haliburton Kawartha Pine Ridge HU
Rhonda Bateman, CAO/Secretary-Treasurer, Lower Trent Conservation Authority
Office File

COBOURG DRINKING WATER SYSTEM
6 D'ARCY ST, COBOURG, ON, K9A 3Z4

INSPECTION REPORT

System Number:	220000825
Entity:	CORPORATION OF THE TOWN OF COBOURG
Inspection Start Date:	July 18, 2023
Inspection End Date:	August 14, 2023
Inspected By:	Viktoria Light
Badge #:	1100

Viktoria Light
(signature)

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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	**Question ID:** DWMR1115000 Were the inspection questions sufficient to address other non-compliance items identified during the inspection period?	The following instance(s) of non-compliance were noted during the inspection: Refer to page 23 of this inspection report for non-compliance details. Required Actions: The operating authority for the Cobourg DWS shall ensure that Operations Manual(s) contains all procedures prescribed by Condition 16 of the current Municipal Drinking Water Licence, including the procedure for dealing with complaints related to the drinking water system. A. By September 16, 2023, the operating authority for the Cobourg DWS shall develop and include in the Operations Manual(s) a procedure for dealing with complaints related to drinking water system which contains the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint. A copy of the procedure shall be submitted to the signed Provincial Officer by September 16, 2023. B. It is recommended that the operating authority for the Cobourg DWS consolidate all operational and maintenance procedures in electronic format into a single folder/documnet and creates a table of contents for easy access by the system operators. It is also recommended that a hard copy of the standard operating procedures (SOP) document is maintained at the facility's control room. It is further recommended that the operating authority for the Cobourg DWS develops and includes in the SOP document, at a minimum, the following additional procedures:

	• Responding to chlorine and turbidity analyzer failures; • Regular testing of the minimum chlorine and maximum turbidity alarms set at the on-line monitoring equipment; • Regular testing of coagulant feed failure alarm (s); • Daily monitoring and recording of all in-process parameters, including but not limited to, verifications of the primary disinfection chlorine analyzer accuracy. A copy of the consolidated electronic SOP document shall be submitted to the signed Provincial Officer by September 16, 2023.

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):
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.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

On July 18, 2023, Provincial Officer Viktoria Light initiated an unannounced inspection of the Cobourg Drinking Water System (DWS).
Ryan Smith, Adan Taggart and Janine deBoer were in attendance during the inspection.
Please note that all references to the "inspection review period" refer to the elapsed time since the previous Ministry Compliance Inspection was completed. In this inspection report, "inspection review period" refers to the period between July 15, 2022, and July 18, 2023.
The Cobourg DWS is a Class 3 Water Treatment Subsystem and a Class 3 Water Distribution Subsystem.
During the inspection review period, the Cobourg DWS was operated under authority of the following control documents:

- Permit to Take Water Number 3404-CKXRLW (issued November 10, 2022),
- Drinking Water Works Permit Number 137-201, Issue Number 3 (issued June 8, 2021), and
- Municipal Drinking Water Licence Number 137-101, Issue Number 4 (issued June 8, 2021).

The drinking-water system inspection included a visual inspection of the treatment facility, York Street Booster Station, Zone 1 and Zone 2 Elevated Tanks, document review and operator

interview.
No audit samples were collected during the inspection.

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.

Question ID	DWMR1012000	Question Type	Legislative

Legislative Requirement(s):
SDWA | 31 | (1);

Question:
Does the owner have a harmful algal bloom monitoring plan in place that meets the requirements of the MDWL?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The owner had a harmful algal bloom monitoring plan in place.

Condition 6 of Schedule C of the MDWL requires that the owner develops and keeps up to date a Harmful Algal Bloom monitoring, reporting and sampling plan, and implement the plan when a potential harmful algal bloom is suspected or present. The owner must have the plan in place on or before December 8, 2021.
'Harmful Algal Bloom Monitoring Plan' was developed by operating authority in May 2019, with the last revision made on March 30, 2023. The plan describes how to identify, monitor, report and sample harmful algal blooms.

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 meters are installed at the common raw water discharge line, at filter 1 & 2 effluent line and at the common treated water discharge header. Raw, filtered and treated water flow meters were calibrated on June 6, 2022, by Franklin Empire Inc.
Flow meters installed at the Cobourg booster station and Tower 1 were calibrated on June 7, 2022, by Franklin Empire Inc.

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.

Part 1.0 of Schedule C of the current MDWL limits the maximum daily volume of treated water that directed to the distribution system to 36,368 m^3/day.
The SCADA summary data was reviewed for the inspection period.
The rated capacity for the flow into the distribution system has not been exceeded during inspection period. The maximum daily volume of treated water entering the distribution system of 11,078 m^3/day was recorded on July 12, 2023.

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.

'Main Break', 'Install New Service' and MECP 'Watermain Disinfection Procedure' are available

in electronic format on the shared drive. These procedures will be included in the QMS document in the near future.

Question ID	DWMR1020000	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 1 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 1 documents as required by their Drinking Water Works Permit during the inspection period.

Since the last compliance inspection, three (3) Form 1 documents (Record of Watermains Authorized as a Future Alteration) were completed in July 2023, for the watermain replacement at Albert Street, Buckle Street, Blake Street, Victoria Street, Furnace Street, Green Street and Ranking Blvd.

Question ID	DWMR1025000	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.

Question ID	DWMR1023000	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.

The Cobourg DWS obtains water from a surface water source (Lake Ontario). The treatment system must be capable of achieving an overall performance that provides, at a minimum, 4-log removal or inactivation of viruses, 3-log removal or inactivation of Giardia cysts and 2-log removal or inactivation of Cryptosporidium oocysts.
The treatment system at the Cobourg DWS consists of chemically assisted filtration followed by disinfection using gas chlorination. The chemically assisted filtration is credited to provide 2-log Cryptosporidium oocysts, 2.5-log Giardia cysts and 2-log viruses removal or inactivation.
Chlorine disinfection is required to provide, at a minimum, 0.5-log removal or inactivation of Giardia cysts.
The primary disinfection free chlorine residual is continuously measured at the end of the chlorine contact tank and recorded on a SCADA system. Weekly grab sample verifications of analyzer accuracy are recorded in the logbook.
The minimum chlorine residual required to achieve primary disinfection in the worst-case conditions, using both chlorine contact chambers, is 1.0 mg/L, according to the CT calculations included in the O&M Manual. The minimum chlorine residual alarm set at the chlorine analyzer monitoring primary disinfection is 1.0 mg/L. The minimum chlorine alarm will trigger an automatic production shutdown.
The monthly data summaries were reviewed for the inspection period. The minimum primary disinfection chlorine residual of 1.30 mg/L was recorded on December 1, 2022.
To claim 2.5 log Giardia cysts removal and 2.0 log Cryptosporidium oocyst removal credit, the chemically assisted filtration process at the Cobourg DWS must meet the monthly performance criterion for filtered water turbidity of less or equal to 0.3 NTU in 95% of the measurements each month.
The continuous permeate turbidity readings are recorded on the SCADA system.
The review of the monthly data summaries confirmed that filter effluent turbidities were maintained below 0.3 NTU in 100% of the time during the inspection period.
During the inspection review period, the Cobourg DWS provided the required minimum level of treatment through chemically assisted filtration and chlorine disinfection.

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.

Distribution chlorine residual records, both monthly summaries of the on-line data and grab sample test results, were reviewed for the inspection period.
Since the last inspection, the minimum distribution free chlorine residual of 0.43 mg/L was measured and recorded on October 6, 2022, at the Zone 1 elevated tank.

Question ID	DWMR1033000	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 7-2 | (3); SDWA | O. Reg. 170/03 | 7-2 | (4);

Question:
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The secondary disinfectant residual was measured as required for the large municipal residential distribution system.

Distribution system free chlorine residuals were continuously measured at the Cobourg booster station and Zone 1 elevated tank by on-line chorine analyzers. Chlorine residuals were continuously recorded on the SCADA system.
In addition, distribution chlorine residuals were measured during bacteriological sampling using a hand-held colourimetric unit.

Question ID	DWMR1030000	**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.

The primary disinfection free chlorine residual is measured at the discharge from a two-cell chlorine contact tank.

Question ID	DWMR1032000	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 7-3 | (2);

Question:
If the drinking water system obtains water from a surface water source and provides filtration, is continuous monitoring of each filter effluent line being performed for turbidity?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Continuous monitoring of each filter effluent line was being performed for turbidity.

On-line turbidity analyzers are located at the discharge lines from filter #1 and #2. Filter effluent turbidities are continuously measured and recorded on the SCADA system.

Question ID	DWMR1035000	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.

Operation staff visited the facility each day and reviewed the on-line trending of the operational parameters.
The trending review, daily operational parameters and checks, as well as any unusual observations, were documented 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.

The SCADA system recorded operational parameters (chlorine residuals, turbidities, flows, etc.) continuously every 4 seconds.

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.

The minimum chlorine residual required to achieve primary disinfection in the worst-case conditions, using both chlorine contact chambers (based on pH of 7.5, temperature less than 5 C), is 1.0 mg/L, according to the CT calculations submitted to the MECP Permissions Branch.
It was reported during the inspection that the minimum and maximum chlorine alarms at the continuous chlorine analyzer monitoring primary disinfection are set at 1.0 mg/L and 3.0 mg/L, respectively. The minimum chlorine alarm will trigger an automatic filtered water production shutdown.
In addition, chlorine residual is measured at the inlet into chlorine contact chamber. The minimum alarm set at this chlorine analyzer is 1.0 mg/L.
The alarms will trigger an immediate notification to the operator.
At the time of the inspection, the maximum (high-high) filter effluent turbidity alarm and an automatic filter shutdown system was set at 0.3 NTU. High filter effluent turbidity alarm was set at 0.2 NTU, which will trigger an automatic filter backwash.

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 on-line raw and filtered water turbidity, as well as on-line chlorine residual analyzers monitoring primary disinfection primary disinfection, were calibrated on June 24, 2023, by Nichol Water Services.
All hand-held chlorine and turbidity analyzers were calibrated by Nichol Water Services on June 24, 2023.
On-line chorine analyzers located at the booster pumping station and Zone 1 and 2 elevated tanks were calibrated on June 24, 2023, by Nichol Water Services.

Question ID	DWMR1099000	**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).

The laboratory analytical test results were reviewed for the period from July 1, 2022, 2020, to July 18, 2023.
Test results of drinking water samples taken during the inspection period for analysis by a licensed laboratory showed that chemical and microbiological parameters were below the Ontario Drinking Water Standards in all samples collected.

Question ID	DWMR1081000	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 10-2 | (1); SDWA | O. Reg. 170/03 | 10-2 | (2); SDWA | O. Reg. 170/03 | 10-2 | (3);

Question:
For LMR systems, are all microbiological water quality monitoring requirements for distribution

samples being met?

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

All microbiological water quality monitoring requirements prescribed by legislation for distribution samples in a large municipal residential system were being met.

The Cobourg distribution system serves a population of approximately 19,440 residents. The system is classified as a large municipal residential system, and the owner and operating authority for the system is required to collect at a minimum twenty-seven (27) distribution samples each month and have them tested for the prescribed bacteriological parameters. During the inspection period, the operation staff collected eight (8) distribution samples each week and on average 35 distribution samples each month for microbiological analysis. Free chlorine residuals were measured at the time of sampling. All distribution samples were tested for total coliform, E. coli and heterotrophic plate count bacteria.

Question ID	DWMR1083000	**Question Type**	Legislative

Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 10-3;

Question:

For LMR systems, are all microbiological water quality monitoring requirements for treated samples being met?

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

All microbiological water quality monitoring requirements prescribed by legislation for treated samples were being met.

During the inspection period, water samples were collected from a designated treated water tap on a weekly basis and tested for total coliforms, E. coli and heterotrophic plate count bacteria.

Question ID	DWMR1096000	**Question Type**	Legislative

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 confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.

Question ID	DWMR1084000	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 13-2;

Question:
Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

The Cobourg DWS obtains water from a surface water source. The owner and the operating authority for the system is required to take at least one treated water sample every 12 months and have it tested for each parameter set out in Schedule 23 of O.Reg.170/03.
Treated water samples were collected and tested for inorganic parameters listed in Schedule 23 on January 12, 2023.

Question ID	DWMR1085000	Question Type	Legislative

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.

Treated water samples were collected and tested for organic parameters listed in Schedule 24 every 12 months, in accordance with Schedule 13-4 of O.Reg. 170/03.
The sampling and testing for organic parameters was conducted on January 12, 2023..

Question ID	DWMR1086000	Question Type	Legislative

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.

Since the last ministry inspection, haloacetic acid samples were collected at the Cobourg booster station on August 15, 2022; November 28, 2022; January 23, 2023; April 17, 2023, and July 17, 2023.
The running annual average of haloacetic acids in the samples collected in the past four quarters was 5.375 µg/L.

Question ID	DWMR1087000	**Question Type**	Legislative

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);

Question:

Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?

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.

Since the last ministry inspection, trihalomethane samples were collected at June Avenue yard hydrant on August 15, 2022; November 28, 2022; January 23, 2023; April 17, 2023, and July 17, 2023.
The running annual average of trihalomethanes in the samples collected in the past four quarters was 25.5 µg/L.

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.

Nitrate & nitrite samples were collected at the treatment facility on August 15, 2022; November 28, 2022; January 23, 2023; April 17, 2023, and July 17, 2023.
The concentration of nitrates and nitrites in all collected samples was below the Ontario Drinking Water Quality Standard (ODWS) of 10 mg/L and 1 mg/L, respectively.

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 owner of a drinking water system and the operating authority for the system must ensure that at least one water sample is taken every 60 months and tested for sodium.
The sodium sample was collected on September 16, 2019. The concentration of sodium in this treated water sample was 12.6 mg/L.

Question ID	DWMR1090000	**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.

If a drinking water system does not provide fluoridation, the owner of the system and the operating facility for the system must ensure that a treated water sample is taken at least once every 60 months and is tested for fluoride, in accordance with Schedule 13-9 of O.Reg.170/03.
The fluoride sample was collected on September 16, 2019. The fluoride concentration in the collected sample was 0.10 mg/L.

Question ID	DWMR1094000	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.

Section 5.2 of the Schedule C of the Municipal Drinking Water Licence requires collection of monthly composite samples for total suspended solids (TSS) analysis and monthly grab samples for total chlorine residual analysis in the wastewater supernatant discharged to Lake Ontario. The MDW sets the annual running average limits for TSS at 25 mg/L, and a limit of 0.02 mg/L for total chlorine residual.
The document review confirmed that wastewater samples were collected monthly and analyzed for total suspended solids. The 2022 annual average of TSS was 2.17 mg/L.
A grab sample of wastewater supernatant was collected each month and tested for total chlorine residual. The test results were documented in the facility logbook. The data review for the inspection period confirmed that all total chorine residuals were maintained at or below 0.02 mg/L.

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.

Standard operating procedures prescribed by the MDWL include CT calculations, AWQI reporting, sample & sample handling, sampling schedule, analyzer calibration & maintenance, harmful algal bloom monitoring plan, water system emergency response plan, emergency power system maintenance, MECP standard for watermain disinfection, etc.
All procedures are currently available in the electronic format only and are contained within various folders and files.
It was noted that a procedure for dealing with complaints related to the drinking water was not available electronically or in a hard copy.
Refer to Action Required for corrective actions related to contents of Operations Manual.

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.

Question ID	DWMR1062000	**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.

Distribution system chlorine residuals measured by a hand-held instrument during bacteriological sampling were recorded in the operation logs and chain of custody forms along with operator's initials.

All operators working at the Cobourg DWS are appropriately certified to conduct operational tests.

Question ID	DWMR1071000	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 property around the Cobourg water treatment facility is fenced. The building's access door is locked and equipped with Alliance security alarm system.
The entry door to the Zone 1 and 2 elevated tanks and booster station are locked and equipped with Alliance intrusion alarm system.

Question ID	DWMR1073000	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 Cobourg DWS is classified as a Class 3 Water Treatment Subsystem and a Class 3 Water Distribution Subsystem.
During the inspection period Larry Spyrka, Manager of Water Capital Projects, was designated as the Overall Responsible Operator (ORO). Mr. Spyrka holds valid Class 3 Water Treatment Subsystem and Class 3 Water Distribution and Supply Subsystem certificates.
In his absence, Adam Taggart, Water Distribution & Systems Supervisor, have assumed the role of ORO. Mr. Taggart holds valid Class 4 Water Treatment Subsystem and Class 4 Water Distribution and Supply Subsystem certificates.
The ORO designation is documented in the logbook.

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 Lakefront Utility Services Inc. deems all operators certified with Class 1 Water Treatment or Distribution & Supply certificates or higher as OIC.
The following operators were designated as OIC and were credited OIC experience for every working hour:

- Scott Noble (WTS Class 2, WD&SS Class 2)
- Scott Prins (WTS Class 2)
- Mathew Wherry (WTS Class 3, WD&SS Class 3)
- Ryan Smith (WTS Class 3)
- Jordan Price (WD&SS Class 4, WTS OIT)
- Nicolas Cunningham (WD&SS Class 3, WTS OIT)

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.

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.

Question ID	DWMR1115000	**Question Type**	Legislative

Legislative Requirement(s):
Not Applicable

Question:
Were the inspection questions sufficient to address other non-compliance items identified during the inspection period?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The following instance(s) of non-compliance were noted during the inspection:

Refer to page 23 of this inspection report for non-compliance details.

Required Actions:
The operating authority for the Cobourg DWS shall ensure that Operations Manual(s) contains all procedures prescribed by Condition 16 of the current Municipal Drinking Water Licence, including the procedure for dealing with complaints related to the drinking water system.
A. By September 16, 2023, the operating authority for the Cobourg DWS shall develop and include in the Operations Manual(s) a procedure for dealing with complaints related to drinking water system which contains the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint.
A copy of the procedure shall be submitted to the signed Provincial Officer by September 16, 2023.
B. It is recommended that the operating authority for the Cobourg DWS consolidate all operational and maintenance procedures in electronic format into a single folder/documnet and creates a table of contents for easy access by the system operators.
It is also recommended that a hard copy of the standard operating procedures (SOP) document is maintained at the facility's control room.
It is further recommended that the operating authority for the Cobourg DWS develops and includes in the SOP document, at a minimum, the following additional procedures:
• Responding to chlorine and turbidity analyzer failures;
• Regular testing of the minimum chlorine and maximum turbidity alarms set at the on-line monitoring equipment;
• Regular testing of coagulant feed failure alarm(s);
• Daily monitoring and recording of all in-process parameters, including but not limited to, verifications of the primary disinfection chlorine analyzer accuracy.
A copy of the consolidates electronic SOP document shall be submitted to the signed Provincial Officer by September 16, 2023.

It was noted during the document review that facility operating procedures are currently available in the electronic format only and are housed within various folders and files, not easily accessible to the operation staff.
It was further noted that a procedure for dealing with complaints related to the drinking water system, which complies with Condition 16.2.7 of the current Municipal Drinking Water Licence, was not available electronically or in a hard copy.

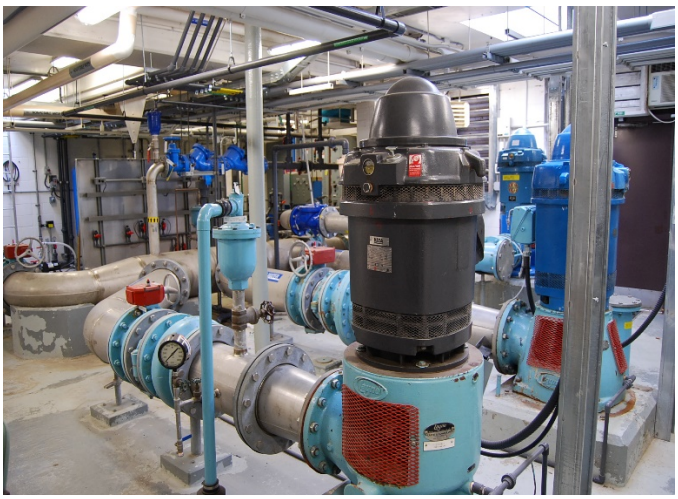
KEY REFERENCE AND GUIDANCE MATERIAL

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

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

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

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

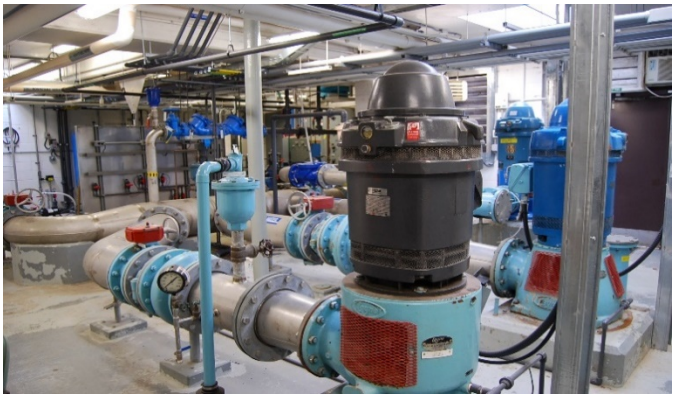


PUBLICATION TITLE	PUBLICATION NUMBER
FORMS: Drinking Water System Profile Information Laboratory Services Notification Adverse Test Result Notification	 012-2149E 012-2148E 012-4444E
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	Website
Procedure for Disinfection of Drinking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

Ontario

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 Avis de demande de services de laboratoire Avis de résultats d'analyse insatisfaisants et de règlement des problèmes	012-2149F 012-2148F 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 portable 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

PIBS 8990b01

Ontario

INSPECTION REPORT RATING

Ministry of the Environment, Conservation and Parks - Inspection Summary Rating Record (Reporting Year - 2023-24)

DWS Name:	COBOURG DRINKING WATER SYSTEM
DWS Number:	220000825
DWS Owner:	CORPORATION OF THE TOWN OF COBOURG
Municipal Location:	COBOURG
Regulation:	O.REG. 170/03
DWS Category:	DW Municipal Residential
Type of Inspection:	Focused
Inspection Date:	Jul-18-2023
Ministry Office:	Peterborough District Office

Maximum Risk Rating: 444

Inspection Module	Non Compliance Risk (X out of Y)
Capacity Assessment	0/30
Certification and Training	0/42
Logbooks	0/18
Operations Manuals	0/28
Other Inspection Findings	0/0
Source	0/0
Treatment Processes	0/214
Water Quality Monitoring	0/112
Overall - Calculated	**0/444**

Inspection Risk Rating:	**0.00%**

Final Inspection Rating:	**100.00%**

Inspection Rating Record Generated On 2023-08-22 (Inspection ID: 1-204083809)

DWS Name:	COBOURG DRINKING WATER SYSTEM
DWS Number:	220000825
DWS Owner Name:	CORPORATION OF THE TOWN OF COBOURG
Municipal Location:	COBOURG
Regulation:	O.REG. 170/03
DWS Category:	DW Municipal Residential
Type of Inspection:	Focused
Inspection Date:	Jul-18-2023
Ministry Office:	Peterborough District Office

Non-Compliance Question(s)	Non Compliance Risk
Other Inspection Findings	
Were the inspection questions sufficient to address other non-compliance items identified during the inspection period?	0
Overall - Total	**0**

Maximum Question Rating: 444

Inspection Risk Rating:	**0.00%**
FINAL INSPECTION RATING:	**100.00%**