

Ministry of the Environment,
Conservation and Parks

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

Drinking Water and Environmental
Compliance Division, Northern Region

Division de la conformité en matière d'eau potable
et d'environnement, Direction régionale du Nord

933 Ramsey Lake Road
4th Floor
Sudbury ON P3E 6B5
Tel.: 705 564-3237
Toll Free: 1-800-890-8516
Fax: 705 564-4180

933, rue Ramsey Lake
4^e étage
Sudbury ON P3E 6B5
Tél. : 705 564-3237
Numéro sans frais: 1-800-890-8516
Téléc. : 705 564-4180

September 6, 2024

Ms. Anne Whelan, Clerk-Administrator, Township of Sables-Spanish Rivers
11 Birch Lake Road
Massey, ON P0P 1P0

RE: 2024/25 Inspection Report for the Massey Drinking Water System, DWS# 220003500

Dear Ms. Whelan,

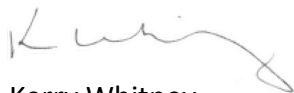
Please find attached the annual Massey Drinking Water System inspection report for the year 2024-25 and the corresponding Incident Rating Report (IRR) and Risk Methodology document. This report provides an assessment of compliance and conformance based on observations and information available during the inspection review period only.

The IRR is a summarized quantitative measure of the drinking water system's annual inspections 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/licensed laboratory inspection results.

A copy of this inspection report has been provided to Public Health Sudbury and Districts, as per the Ministry's Drinking Water Inspection Protocol.

Should you have any questions regarding the attached document or your obligations under Ontario's drinking water legislation, please contact me by email at kerry.whitney@ontario.ca or by telephone at 705-507-4000.

Sincerely,



Kerry Whitney
Water Compliance Officer
Badge No. 1396
Tel: 705-507-4000

Email: Kerry.whitney@ontario.ca

Cc: Keith Stringer, Operations Manager, OCWA Espanola Hub
Sarah Beaulieu, Process and Compliance Technician, OCWA Espanola Hub
Natalie Wagar, Process and Compliance Technician, OCWA Espanola Hub
Burgess Hawkins, Manager-Health Protection Division, Public Health Sudbury & Districts



MASSEY DRINKING WATER SYSTEM

Physical Address: 815 IMPERIAL ST N, , SABLES-
SPANISH RIVERS, ON P0P 1P0

INSPECTION REPORT

Entity: ONTARIO CLEAN WATER
AGENCY
CORPORATION OF THE
TOWNSHIP OF SABLES-
SPANISH RIVERS

Inspection Start Date: July 01, 2024
Site Inspection Date: August 08, 2024
Inspection End Date: August 29, 2024
Inspected By: Kerry Whitney
Badge #: 1396
Inspected By: Marnie Managhan
Badge #: 718



(signature)

INTRODUCTION

Purpose

This announced, detailed inspection was conducted to confirm compliance with Ministry of the Environment, Conservation and Parks' (MECP) legislation and conformance with ministry drinking water policies and guidelines.

Scope

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 and the operation of the system.

The inspection of the drinking water system included both the physical inspection of the component parts of the system listed in section 4 "Systems Components" of the report and the review of data and documents associated with the operation of the drinking water system during the review period.

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.

Facility Contacts and Dates

The drinking water system is owned by The Corporation of the Township of Sables-Spanish Rivers and operated by Ontario Clean Water Agency (OCWA).

The system serves an estimated population of 884 and is categorized as a Large Municipal Residential System. Information reviewed for this inspection covered the time period of September 1, 2023 to June 30, 2024.

Kerry Whitney, Water Compliance Officer (MECP) met with Natalie Wager, Process and Compliance Technician (OCWA) and Kevin Cooper, Plant Operator (OCWA) as part of the inspection process.

Systems/Components

All locations associated with primary disinfection were visited as part of this inspection. The following sites were visited as part of the inspection of the drinking water system:

- raw water intake on the shore of the Aux Saubles River;
- Massey Water Treatment Plant; and
- elevated water storage tank.

Permissions/Approvals

This drinking water system was subject to specific conditions contained within the following permissions and/or approvals (please note this list is not exhaustive) at the time of the inspection in addition to the requirements of the SDWA and its regulations:

- Municipal Drinking Water License No. 215-101 (Issue No. 4);
- Drinking Water Works Permit No. 215-201 (Issue No. 3)
- Permit to Take Water No. P-300-306973401 (Version 1.0)

NON-COMPLIANCE

This should not be construed as a confirmation of full compliance with all potential applicable legal requirements. 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.

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	DWMR1012001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner have a harmful algal bloom monitoring plan in place that met the requirements of the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had a harmful algal bloom monitoring plan in place which met the requirements.			

Question ID	DWMR1010001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Were trends in source water quality monitored?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Trends in source water quality were monitored.			

Question ID	DWMR1014001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Was flow monitoring performed as required by the Municipal Drinking Water Licence or Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Flow monitoring was performed as required. Municipal Drinking Water License 215-101 (Issue 4) requires that there be continuous flow measurement and recording for: The flow rate (L/s) and daily volume (m3/day) of treated water that flows from the treatment			

subsystem to the distribution system; and
The flow rate (L/s) and daily volume (m³/day) of water that flows into the treatment subsystem.

It was confirmed at the time of the of the inspection that flow measuring devices were installed and in operation to measure flow rates and volumes of water supplied to the water treatment plant to measure flow rates and volumes of water supplied to the distribution system.

Question ID	DWMR1015001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were flow measuring devices calibrated or verified in accordance with the requirements of the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Flow measuring devices were calibrated or verified as required. Work orders are generated on a pre-set schedule which are based on manufacturers recommendations and/or applicable legislation. Records indicate the raw water and treated water flow meters were verified on October 26, 2023.			

Question ID	DWMR1016001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Was the owner in compliance with the conditions associated with maximum flow rate or the rated/operational capacity in the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner was in compliance with the conditions associated with maximum flow rate and/or the rated/operational capacity conditions. Condition 1.1 of Schedule C of MDWL 215-101 (Issue 4) states the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed 1,500 m ³ /day. A review of the treated water flow data indicates that there were no exceedances during this review period. The highest recorded treated flow during this inspection period was 1029.50 m ³ /day recorded on October 5, 2023 which is higher than usual due to distribution system flushing.			

Question ID	DWMR1017001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were appropriate records of flows and any capacity exceedances made in accordance with the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Appropriate records of flows and any capacity exceedances were made as required.			

Question ID	DWMR1013001	Question Type	Legislative
Legislative Requirement(s): OWRA 34 (3);			
Question: Was the owner in compliance with all conditions of the Permit To Take Water?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner was in compliance with all conditions of the Permit To Take Water. The Massey WTP also operates under Permit To Take Water (PTTW) P-300-3069733401, issued February 15, 2020 and expiring February 15, 2030. The PTTW restricts water takings from the River aux Sables to a daily maximum of 1,500,000 litres per day. A review of water taking data indicates the requirements of the PTTW were met. The highest recorded total raw flow during this inspection period was 1029.5 m ³ /d (1,029,500 liters per day) recorded on October 5, 2023.			

Question ID	DWMR1018001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner ensure that equipment was 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 ensured that equipment was installed as required. The Massey Drinking Water System operates under Municipal Drinking Water Works Permit 215-201 (Issue 3). The equipment, as identified in the permit, was reviewed at the time of the inspection and was found to be in order. The previous inspection report indicated a problem with a highlift pump that was found to be			

out of service at the time of the last inspection. The highlift pump has since been replaced with a new highlift pump and is operational.

Question ID	DWMR1021001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were Form 2 documents prepared as required?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Form 2 documents were prepared as required. Form 2 - Record of Minor Modifications or Replacements to the Drinking Water System were submitted for the following: - replaced filtered and treated water turbidity analyzers; and - replaced motor and gear box for maturation mixer.			

Question ID	DWMR1028001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were up-to-date plans for the drinking water system made available in such a manner that they could be readily viewed by all persons responsible for all or part of the operation of the drinking water system, in accordance with the Drinking Water Works Permit and Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Plans for the drinking water system were kept up-to-date and made available as required.			

Question ID	DWMR1025001	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 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 as required.			

Question ID	DWMR1023001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			
Question: Did records indicate that the treatment equipment was operated in a manner that achieved the design capabilities prescribed by O. Reg. 170/03, Drinking Water Works Permit and/or Municipal Drinking Water Licence 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 prescribed. The Massey Water Treatment Plant is a conventional surface water treatment plant that operates under "Municipal Drinking Water License Number 215-101" (Issue 4), dated March 18, 2021, and "Drinking Water Works Permit Number 215-201" (Issue 3), dated March 18, 2021, at a rated capacity of 1,500 cubic meters/day. The treatment process is described as a proprietary high rate sedimentation treatment unit known as "ACTIFLO". The treatment system includes coagulation, alkalinity adjustment, sedimentation through the addition of ballasting sand, and dual media filters. The treated water is disinfected using sodium hypochlorite. There is no fluoride addition at this facility. The system is designed to meet the minimum 2-log removal of <i>Cryptosporidium</i> oocytes, 2.5-log removal of <i>Giardia</i> cysts and 2-log removal of viruses through chemically assisted filtration. The minimum 0.5-log removal/inactivation of <i>Giardia</i> cysts and 2+log removal/inactivation of viruses is achieved through disinfection by chlorination. In order to apply the noted log removal credits for the filtration portion of the treatment process, the following criteria must be met at all times: - Chemical coagulant shall be used at all times when the treatment plant is in operation; - Chemical dosages shall be monitored and adjusted in response to variations in raw water quality; - Effective backwash procedures shall be maintained including filter-to-waste or an equivalent procedure during filter ripening to ensure that effluent turbidity requirements are met at all times; - Filtrate turbidity shall be continuously monitored from each filter; and - Performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month shall be met for each filter. In order to apply the noted log removal credits for the disinfection portion of the treatment process, the following criteria must be met at all times: - Sampling and testing for free chlorine residual shall be carried out by continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario; and - At all times, CT provided shall be greater than or equal to the CT required to achieve the log			

removal credits assigned.

It was determined by the design engineer that, based on worst case conditions, a chlorine residual of 0.8 mg/L would need to be maintained to ensure the required CT of 70 mg/L/min is being achieved.

Process data and supporting documentation provided during the course of the inspection indicates that the Massey Water Treatment Plant is operating in accordance with the above requirements.

Question ID	DWMR1027001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner have evidence indicating that chemicals and materials that came in contact with water within the drinking water system met all applicable AWWA and ANSI standards in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had evidence indicating that chemicals and materials that came in contact with water within the drinking water system met the applicable standards.			

Question ID	DWMR1024001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			
Question: Did records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection 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 was operated as required. A review of the provided data indicates that chlorine residuals in the distribution system were above 0.05mg/L throughout the inspection period. The highest chlorine residual recorded was 1.60 mg/L on March 11, 2024 and the lowest recorded was 0.28 mg/L on November 14, 2023.			

Question ID	DWMR1033001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-2 (3); SDWA O. Reg. 170/03 7-2 (4);			

Question:

Was secondary disinfectant residual tested as required for the large municipal residential distribution system?

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

Secondary disinfectant residual was tested as required.

Each week, 7 chlorine residual samples are tested from the distribution system. The seven samples are split between two days, with four samples taken on one day and three samples on another day.

It was confirmed that the samples collected on the same day were taken at separate locations. The distribution chlorine residual sample result, date, time, location of sample and individual who took the sample was documented as required.

Question ID	DWMR1049001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Did records confirm that disinfectant residuals were routinely checked at the extremities and dead ends of the distribution system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Records confirmed that disinfectant residuals were routinely checked at the extremities and dead ends of the distribution system.			

Question ID	DWMR1036001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-7 (1);			
Question: Where continuous monitoring equipment was not used for chlorine residual analysis, were samples tested using an acceptable portable device?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Samples for chlorine residual analysis were tested using an acceptable portable device.			

Question ID	DWMR1030001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-2 (1); SDWA O. Reg. 170/03 7-2 (2);			

Question:

Was primary disinfection chlorine monitoring being conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit or at/near a location where the intended CT had just been achieved?

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

Primary disinfection chlorine monitoring was conducted as required.

Primary disinfection chlorine monitoring is being conducted at the plant discharge line as required by the DWWP.

Question ID	DWMR1031001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Were operators aware of the operational criteria necessary to achieve primary disinfection within the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Operators were aware of the operational criteria necessary to achieve primary disinfection within the drinking water system.			

Question ID	DWMR1032001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-3 (2);			
Question: If the drinking water system obtained water from a surface water source and provided filtration, was continuous monitoring of each filter effluent line performed for turbidity?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Continuous monitoring of each filter effluent line was performed for turbidity. Turbidity analyzers are located at the head of each filter and are continuously monitored.			

Question ID	DWMR1035001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4;			
Question: Were operators examining continuous monitoring test results and did they examine the results within 72 hours of the test?			

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

Operators were examining continuous monitoring test results as required.

The Massey DWS follows their established Standard Operating Procedure - Continuous Monitoring Data Review.

Question ID	DWMR1038001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)1-4;			
Question: Was continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency 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 and recording data with the prescribed format.			

Question ID	DWMR1037001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1);			
Question: Were 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, equipped with alarms or shut-off mechanisms that satisfied the standards described in Schedule 6?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All required continuous monitoring equipment utilized for sampling and testing were equipped with alarms or shut-off mechanisms that satisfied the standards Continuous chlorine analyzer is alarmed and will lockout high lift pumps at a low chlorine setpoint of 0.70 mg/L. Continuous filter effluent turbidity monitor is alarmed at 0.40 NTU (high) and 0.80 NTU (high high) with a 600 second delay on both filters. Filter to waste will run for 30 minutes; shut down will occur if turbidity does not fall below the alarm setpoint of 0.28 NTU.			

Question ID	DWMR1040001	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:

Were 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 as required.

The calibration and maintenance of analyzers is part of the electronic maintenance management system. Work orders are generated on pre-set schedules, which are based on manufacturer's recommendations and/or any applicable regulations. The operators are responsible to ensure the activity in the work order is completed and that the document is electronically closed.

Question ID	DWMR1108001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1);			
Question: Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, Municipal Drinking Water Licence, Drinking Water Works Permit, or order triggered an alarm or an automatic shut-off, did a qualified person respond as required and take appropriate actions?			
Compliance Response(s)/Corrective Action(s)/Observation(s): A qualified person responded as required and took appropriate actions.			

Question ID	DWMR1099001	Question Type	Information
Legislative Requirement(s): Not Applicable			
Question: Do records show that water provided by the drinking water system met the Ontario Drinking Water Quality Standards?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Records showed that all water sample results met the Ontario Drinking Water Quality Standards.			

Question ID	DWMR1079001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 10-4 (1); SDWA O. Reg. 170/03 10-4 (2); SDWA O. Reg. 170/03 10-4 (3);			

Question:

Were raw water microbiological sampling requirements prescribed by Schedule 10-4 of O. Reg. 170/03 for large municipal residential systems met?

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

Raw water microbiological sampling requirements were met.

Question ID	DWMR1083001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 10-3;			
Question: Were treated microbiological sampling requirements prescribed by Schedule 10-3 of O. Reg. 170/03 for large municipal residential systems met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Treated microbiological sampling requirements were met.			

Question ID	DWMR1081001	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: Were distribution microbiological sampling requirements prescribed by Schedule 10-2 of O. Reg. 170/03 for large municipal residential systems met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Distribution microbiological sampling requirements were met. The Massey DWS serves a population of less than 1000 people. Based on that number, a minimum of 8 samples are required to be collected from the distribution system each month with at least one sample taken in each week of the month. The samples must be tested for Escherichia coli (E.coli) and total coliforms, with 25% of the samples required to be taken also tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC).			

Question ID	DWMR1096001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-3 (1);			
Question: Did records confirm that chlorine residual tests were conducted at the same time and location			

as microbiological samples?

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

Records confirmed that chlorine residual tests were conducted as required.

Question ID	DWMR1084001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-2;			
Question: Were inorganic parameter sampling requirements prescribed by Schedule 13-2 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Inorganic parameter sampling requirements were met. A review of the inorganic water quality monitoring data for the inspection period confirm that the required samples were collected on January 16, 2024. All sample results were below the prescribed limits. Previous samples were collected January 17, 2023.			

Question ID	DWMR1085001	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: Were organic parameter sampling requirements prescribed by Schedule 13-4 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Organic parameter sampling requirements were met. A review of the organic water quality monitoring data for the inspection period confirm that the required samples were collected on January 16, 2024. All sample results were below the prescribed limits. Previous samples were collected January 17, 2023.			

Question ID	DWMR1086001	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: Were haloacetic acid sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03			

met?

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

Haloacetic acid sampling requirements were met.

The standard for Haloacetic Acids came into effect on January 1, 2020. It is expressed as a Running Annual Average (RAA), where the RAA is defined as the average for quarterly HAA results for a drinking water system.

HAAs generally form at the beginning of the distribution system and sampling should be completed accordingly.

Sampling for HAAs was completed on the following dates with the results as noted:

July 17, 2023 – 46.3 ug/L

October 17, 2023 – 29.2 ug/L

January 16, 2024 – 35.4 ug/L

April 9, 2024 – 30.6 ug/L

The running average based on the last four results is 35.38 ug/L. The running average did not exceed the 80 ug/L limit during the inspection period.

Question ID	DWMR1087001	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: Were trihalomethane sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Trihalomethane sampling requirements were met.			
At least one distribution sample is required to be collected every three months and tested for trihalomethanes (THMs). A review of water quality data for this inspection period confirmed that THMs samples were collected in accordance with the legislative requirements.			
THM samples were collected on the following dates with the subsequent results:			
July 17, 2023 – 62.0 ug/L			
October 17, 2023 – 45.0 ug/L			
January 16, 2024 – 31.0 ug/L			
April 9, 2024 – 33.0 ug/L			
The running average based on the last four results is 42.75 ug/L. The running average did			

not exceed the 100 ug/L limit during the inspection period.

Question ID	DWMR1088001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-7;			
Question: Were nitrate/nitrite sampling requirements prescribed by Schedule 13-7 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Nitrate/nitrite sampling requirements were met. Schedule 13-7 of the O. Reg. 170/03 requires at least one distribution sample be collected every three months and tested for Nitrate and Nitrite. Sampling for these parameters was completed as required and all results were below the limits identified by the ODWQS.			

Question ID	DWMR1089001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-8;			
Question: Were sodium sampling requirements prescribed by Schedule 13-8 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Sodium sampling requirements were met. Schedule 13-8 of the O. Reg. 170/03 requires at least one sample to be collected every 60 months and tested for sodium. Sampling for this parameter was last completed on January 11, 2021 and the result was 8.10 mg/L.			

Question ID	DWMR1090001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-9;			
Question: Where fluoridation is not practiced, were fluoride sampling requirements prescribed by Schedule 13-9 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Fluoride sampling requirements were met.			

The requirement is for one sample to be collected every 60 months and tested for fluoride.

Sampling for this parameter was last completed on January 11, 2021 and the result was <0.06 mg/L.

Question ID	DWMR1092001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-2;			
Question: Were water samples taken at the prescribed location?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Water samples were taken at the prescribed location.			

Question ID	DWMR1095001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 15.1-10; SDWA O. Reg. 170/03 15.1-4 (1); SDWA O. Reg. 170/03 15.1-5 (1); SDWA O. Reg. 170/03 15.1-5 (10); SDWA O. Reg. 170/03 15.1-5 (11); SDWA O. Reg. 170/03 15.1-5 (2); SDWA O. Reg. 170/03 15.1-5 (3); SDWA O. Reg. 170/03 15.1-5 (4); SDWA O. Reg. 170/03 15.1-5 (5); SDWA O. Reg. 170/03 15.1-5 (6); SDWA O. Reg. 170/03 15.1-5 (7); SDWA O. Reg. 170/03 15.1-5 (8); SDWA O. Reg. 170/03 15.1-5 (9); SDWA O. Reg. 170/03 15.1-7 (1); SDWA O. Reg. 170/03 15.1-7 (2); SDWA O. Reg. 170/03 15.1-7 (3); SDWA O. Reg. 170/03 15.1-7 (4); SDWA O. Reg. 170/03 15.1-9 (1); SDWA O. Reg. 170/03 15.1-9 (2); SDWA O. Reg. 170/03 15.1-9 (3); SDWA O. Reg. 170/03 15.1-9 (4); SDWA O. Reg. 170/03 15.1-9 (5); SDWA O. Reg. 170/03 15.1-9 (6); SDWA O. Reg. 170/03 15.1-9 (7); SDWA O. Reg. 170/03 15.1-9 (8); SDWA O. Reg. 170/03 15.1-9 (9);			
Question: Were lead sampling requirements prescribed by Schedule 15.1 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Lead sampling requirements were met. The Massey DWS currently qualifies for reduced sampling and is also currently exempt from further "lead in plumbing" samples in accordance with subsection 15.1-5(9) of Schedule 15.1 of O. Reg 170/03. Based on a population of 884, two sets of samples are required to be collected from the distribution system for each sampling period, winter (December 15 through April 15) and summer (June 15 through October 15). Alkalinity and pH testing in the distribution system continues to be required in both sampling periods. Sampling for lead in the distribution system is required every third year in both sampling periods. Lead samples were last collected January 16, 2024 (winter) with results of 0.12 UG/L and			

0.15 UG/L, with the limit being 10 UG/L. Summer sample results are pending. pH and alkalinity are sampled as required.

Question ID	DWMR1110001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 11 (6);			
Question: Was the annual report prepared by February 28th of the following year and did it contain the required information?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The annual report requirements were met.			

Question ID	DWMR1111001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 22-2 (1); SDWA O. Reg. 170/03 22-2 (2); SDWA O. Reg. 170/03 22-2 (3); SDWA O. Reg. 170/03 22-2 (4);			
Question: Did the summary report contain the required information and was it completed and distributed as required?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The summary report requirements were met.			

Question ID	DWMR1098001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13 (1); SDWA O. Reg. 170/03 13 (2); SDWA O. Reg. 170/03 13 (3);			
Question: Were the required records kept for the periods prescribed by section 13 of O. Reg. 170/03?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The required records were kept for the prescribed periods.			

Question ID	DWMR1043001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			

Question:

Were the process wastewater and residual solids/sludges treated, handled, and disposed of in accordance with the design requirements approved under the Drinking Water Works Permit and the Municipal Drinking Water Licence?

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

The process wastewater and residual solids/sludges were treated, handled, and disposed of as required.

It was confirmed at the time of the inspection that the thickened sludge is discharged to a storage tank for periodic disposal by tanker truck and the supernatant is discharged to a drainage ditch.

Question ID	DWMR1044001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the process wastewater discharge monitoring program and discharge quality comply with requirements established in the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The process wastewater discharge monitoring program and discharge quality complied with the requirements. The MDWL requires that the "average annual concentration" of suspended solids in the effluent discharge, not exceed 25 mg/L. The process wastewater effluent discharge is required to be sampled and analyzed on a monthly basis for suspended solids. A review of the monitoring data for this inspection period confirmed that the analysis for suspended solids in the effluent discharge was being conducted on a monthly basis as required and was well below the annual average limit.			

Question ID	DWMR1046001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Was there a backflow prevention program, policy and/or bylaw in place that addressed cross connections and connections to high hazard facilities?			
Compliance Response(s)/Corrective Action(s)/Observation(s): There was a backflow prevention program, policy and/or bylaw in place. MUNICIPALITY			

Question ID	DWMR1053001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Was the owner able to maintain proper pressures in the distribution system and was pressure monitored to alert the operator of conditions of loss of pressure below the value under which the system was designed to operate?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner was able to maintain proper pressures in the distribution system and pressure was monitored to alert the operator of conditions which may lead to loss of pressure below the value under which the system is designed to operate.			

Question ID	DWMR1047001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Did the owner have a program or maintain a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had a program or maintained a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system. The Massey DWS includes an elevated water storage tank which is inspected every five years with the last inspection being completed June 8 2023.			

Question ID	DWMR1048001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Had the owner implemented a program for the flushing of watermain as per industry standards?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had implemented a program for the flushing of watermain.			

Question ID	DWMR1050001	Question Type	BMP
Legislative Requirement(s): Not Applicable			

Question:

Was there a program in place for inspecting and exercising valves?

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

There was a program in place for inspecting and exercising valves.

Beginning October 2024, OCWA will be inspecting and exercising valves. Previously, this work was done by the municipality, which included inspecting and exercising valves in the spring and fall.

Question ID	DWMR1051000	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Is there a program in place for inspecting and operating hydrants?			
Compliance Response(s)/Corrective Action(s)/Observation(s): There was a program in place for inspecting and operating hydrants.			
Beginning October 2024, OCWA will be inspecting hydrants. Previously, this work was done by the municipality, which included flushing hydrants in the spring and winterizing in the fall.			

Question ID	DWMR1052001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Was there a bylaw or policy in place limiting access to hydrants?			
Compliance Response(s)/Corrective Action(s)/Observation(s): There was a bylaw or policy in place limiting access to hydrants.			
The municipality has indicated that only the fire department, public works and OCWA access the hydrants.			

Question ID	DWMR1058001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 28;			
Question: Did operators and maintenance personnel have ready access to operations and maintenance manuals?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Operators and maintenance personnel had ready access to operations and maintenance manuals.			

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Question ID	DWMR1059001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 28;			
Question: Did 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	DWMR1060001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the operations and maintenance manual(s) meet the requirements of the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The operations and maintenance manual(s) met the requirements of the Municipal Drinking Water Licence.			

Question ID	DWMR1064001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 26 (2);			
Question: Did an operator-in-charge ensure that records were maintained of all adjustments to the processes within their responsibility?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The operator-in-charge ensured that records were maintained of all adjustments to the processes within their responsibility.			

Question ID	DWMR1062001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-5;			

Question:

Did records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03?

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 done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03.

Question ID	DWMR1063001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-10 (1);			
Question: For every required operational test and sample, was a record made of the date, time, location, results, and name of the person conducting the test?			
Compliance Response(s)/Corrective Action(s)/Observation(s): For every required operational test and sample, a record was made as required.			

Question ID	DWMR1061001	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: Were logbooks properly maintained and did they contain the required information?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Logbooks were properly maintained and contained the required information.			

Question ID	DWMR1065001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 27 (6);			
Question: Were logs and other record keeping mechanisms available for at least five (5) years?			

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

Logs or other record keeping mechanisms were available for at least five (5) years.

Question ID	DWMR1066001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Was spill containment provided for process chemicals and standby power generator fuel?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Spill containment was provided for process chemicals and/or standby power generator fuel.			

Question ID	DWMR1067001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Were equipment and materials in place for the clean up of spills?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Equipment and materials were in place for the clean up of spills.			

Question ID	DWMR1069001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Were all storage facilities completely covered and secure?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Storage facilities were completely covered and secure.			

Question ID	DWMR1070001	Question Type	BMP
Legislative Requirement(s): Not Applicable			

Question:

Were air vents and overflows associated with reservoirs and elevated storage structures equipped with screens?

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

Air vents and overflows associated with reservoirs and elevated storage structures were equipped with screens.

Question ID	DWMR1071001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Did the owner provide security measures to protect components of the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner provided security measures to protect components of the drinking water system.			

Question ID	DWMR1072001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Had the owner and/or operating authority undertaken efforts to promote water conservation and reduce water losses in the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner and/or operating authority undertook efforts to promote water conservation and reduce water losses in their system. The municipalities Water Restriction By-Law limits the use of the municipal water supply for lawncare to assigned days and hours.			

Question ID	DWMR1073001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 23 (1);			
Question: Was an overall responsible operator designated for all subsystems which comprise the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): An overall responsible operator was designated for all subsystem.			

The Massey Water Treatment Plant is a Class 2 facility, operating under Classification Certificate No. 3429, issued October 27, 2005.

A review of the provided log books and operator certification records indicates that the operating authority has designated an operator as the overall responsible operator (ORO) for the subsystem and has clearly identified that person.

All Operators have the required certifications to act as Overall Responsible Operator (ORO) as required.

Question ID	DWMR1078001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 23 (1); SDWA O. Reg. 128/04 23 (2); SDWA O. Reg. 128/04 23 (4); SDWA O. Reg. 128/04 23 (6); SDWA O. Reg. 128/04 23 (7);			
Question: When the overall responsible operator was unable to act, was a properly certified operator designated to act in their place?			
Compliance Response(s)/Corrective Action(s)/Observation(s): A properly certified operator was designated to act in place of the overall responsible operator.			

Question ID	DWMR1074001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 25 (1);			
Question: Were operators-in-charge designated for all subsystems which comprise the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Operators-in-charge were designated for all subsystems. A review of the provided log books and operator certification records indicates that the operating authority has designated an operator as the operator in charge (OIC) for the subsystem and has clearly identified that person. All Operators have the required certifications to act as operator in charge (OIC) as required.			

Question ID	DWMR1075001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 22;			

Question:

Were all operators certified as required?

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

All operators were certified as required.

Question ID	DWMR1076001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2);			
Question: Were adjustments to the treatment equipment only made by certified operators?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Adjustments to the treatment equipment were only made by certified operators.			

APPENDIX A

IRR

DWS Name:	MASSEY DRINKING WATER SYSTEM
DWS Number:	220003500
DWS Owner:	CORPORATION OF THE TOWNSHIP OF SABLES-SPANISH RIVERS
Municipal Location:	SABLES-SPANISH RIVERS
Regulation:	O.REG. 170/03
DWS Category:	DW Municipal Residential
Type of Inspection:	Detailed
Compliance Assessment Start Date:	Jul-1-2024
Ministry Office:	Sudbury District Office

Inspection Module	Non Compliance Risk (X out of Y)
Capacity Assessment	0/42
Certification and Training	0/49
Effluent Quality and Quantity	0/20
Logbooks	0/30
Operations Manuals	0/42
Reporting & Corrective Actions	0/29
Source	0/12
Treatment Processes	0/234
Water Quality Monitoring	0/136
Overall - Calculated	0/594

Final Inspection Rating:	100.00%
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Ministry of the Environment, Conservation and Parks - Detailed Inspection Rating Record (Reporting Year - 2024-25)

DWS Name:	MASSEY DRINKING WATER SYSTEM
DWS Number:	220003500
DWS Owner Name:	CORPORATION OF THE TOWNSHIP OF SABLES-SPANISH RIVERS
Municipal Location:	SABLES-SPANISH RIVERS
Regulation:	O.REG. 170/03
DWS Category:	DW Municipal Residential
Type of Inspection:	Detailed
Compliance Assessment Start Date:	Jul-1-2024
Ministry Office:	Sudbury District Office

All legislative requirements were met. No detailed rating scores.

Maximum Question Rating: 594

Inspection Risk Rating:	0.00%
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FINAL INSPECTION RATING:	100.00%
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APPENDIX B

RISK METHODOLOGY

APPLICATION OF THE RISK METHODOLOGY USED FOR MEASURING MUNICIPAL RESIDENTIAL DRINKING WATER SYSTEM INSPECTION RESULTS



The Ministry of the Environment (MOE) has a rigorous and comprehensive inspection program for municipal residential drinking water systems (MRDWS). Its objective is to determine the compliance of MRDWS with requirements under the Safe Drinking Water Act and associated regulations. It is the responsibility of the municipal residential drinking water system owner to ensure their drinking water systems are in compliance with all applicable legal requirements.

This document describes the risk rating methodology, which has been applied to the findings of the Ministry's MRDWS inspection

results since fiscal year 2008-09. The primary goals of this assessment are to encourage ongoing improvement of these systems and to establish a way to measure this progress.

MOE reviews the risk rating methodology every three years.

The Ministry's Municipal Residential Drinking Water Inspection Protocol contains 15 inspection modules consisting of approximately 100 regulatory questions. Those protocol questions are also linked to definitive guidance that ministry inspectors use when conducting MRDWS inspections.

ontario.ca/drinkingwater

The questions address a wide range of regulatory issues, from administrative procedures to drinking water quality monitoring. The inspection protocol also contains a number of non-regulatory questions.

A team of drinking water specialists in the ministry assessed each of the inspection protocol regulatory questions to determine the risk (not complying with the regulation) to the delivery of safe drinking water. This assessment was based on established provincial risk assessment principles, with each question receiving a risk rating referred to as the Question Risk Rating. Based on the number of areas where a system is deemed to be non-compliant during the inspection, and the significance of these areas to administrative, environmental, and health consequences, a risk-based inspection rating is calculated by the ministry for each drinking water system.

It is important to be aware that an inspection rating less than 100 per cent does not mean the drinking water from the system is unsafe. It shows areas where a system’s operation can improve. The ministry works with owners and operators of systems to make sure they know what they need to do to achieve full compliance.

The inspection rating reflects the inspection results of the specific drinking water system for the reporting year. Since the methodology is applied consistently over a period of years, it serves as a comparative measure both provincially and in relation to the individual system. Both the drinking water system and the public are able to track the performance over time, which encourages continuous improvement and allows systems to identify specific areas requiring attention.

The ministry’s annual inspection program is an important aspect of our drinking water safety net. The ministry and its partners share a common commitment to excellence and we continue to work toward the goal of 100 per cent regulatory compliance.

Determining Potential to Compromise the Delivery of Safe Water

The risk management approach used for MRDWS is aligned with the Government of Ontario’s Risk Management Framework. Risk management is a systematic approach to identifying potential hazards, understanding the likelihood and consequences of the hazards, and taking steps to reduce their risk if necessary and as appropriate.

The Risk Management Framework provides a formula to be used in the determination of risk:

RISK = LIKELIHOOD × CONSEQUENCE
(of the consequence)

Every regulatory question in the inspection protocol possesses a likelihood value (L) for an assigned consequence value (C) as described in **Table 1** and **Table 2**.

TABLE 1:	
Likelihood of Consequence Occurring	Likelihood Value
0% - 0.99% (Possible but Highly Unlikely)	L = 0
1 – 10% (Unlikely)	L = 1
11 – 49% (Possible)	L = 2
50 – 89% (Likely)	L = 3
90 – 100% (Almost Certain)	L = 4

TABLE 2:	
Consequence	Consequence Value
Medium Administrative Consequence	C = 1
Major Administrative Consequence	C = 2
Minor Environmental Consequence	C = 3
Minor Health Consequence	C = 4
Medium Environmental Consequence	C = 5
Major Environmental Consequence	C = 6
Medium Health Consequence	C = 7
Major Health Consequence	C = 8

The consequence values (0 through 8) are selected to align with other risk-based programs and projects currently under development or in use within the ministry as outlined in **Table 2**.

The Question Risk Rating for each regulatory inspection question is derived from an evaluation of every identified consequence and its corresponding likelihood of occurrence:

- All levels of consequence are evaluated for their potential to occur
- Greatest of all the combinations is selected.

The Question Risk Rating quantifies the risk of non-compliance of each question relative to the others. Questions with higher values are those with a potentially more significant impact on drinking water safety and a higher likelihood of occurrence. The highest possible value would be 32 (4×8) and the lowest would be 0 (0×1).

Table 3 presents a sample question showing the risk rating determination process.

TABLE 3:							
Does the Operator in Charge ensure that the equipment and processes are monitored, inspected and evaluated?							
Risk = Likelihood × Consequence							
C=1	C=2	C=3	C=4	C=5	C=6	C=7	C=8
Medium Administrative Consequence	Major Administrative Consequence	Minor Environmental Consequence	Minor Health Consequence	Medium Environmental Consequence	Major Environmental Consequence	Medium Health Consequence	Major Health Consequence
L=4 (Almost Certain)	L=1 (Unlikely)	L=2 (Possible)	L=3 (Likely)	L=3 (Likely)	L=1 (Unlikely)	L=3 (Likely)	L=2 (Possible)
R=4	R=2	R=6	R=12	R=15	R=6	R=21	R=16

Application of the Methodology to Inspection Results

Based on the results of a MRDWS inspection, an overall inspection risk rating is calculated. During an inspection, inspectors answer the questions related to regulatory compliance and input their “yes”, “no” or “not applicable” responses into the Ministry’s Laboratory and Waterworks Inspection System (LWIS) database. A “no” response indicates non-compliance. The maximum number of regulatory questions asked by an inspector varies by: system (i.e., distribution, stand-alone); type of inspection (i.e., focused, detailed); and source type (i.e., groundwater, surface water).

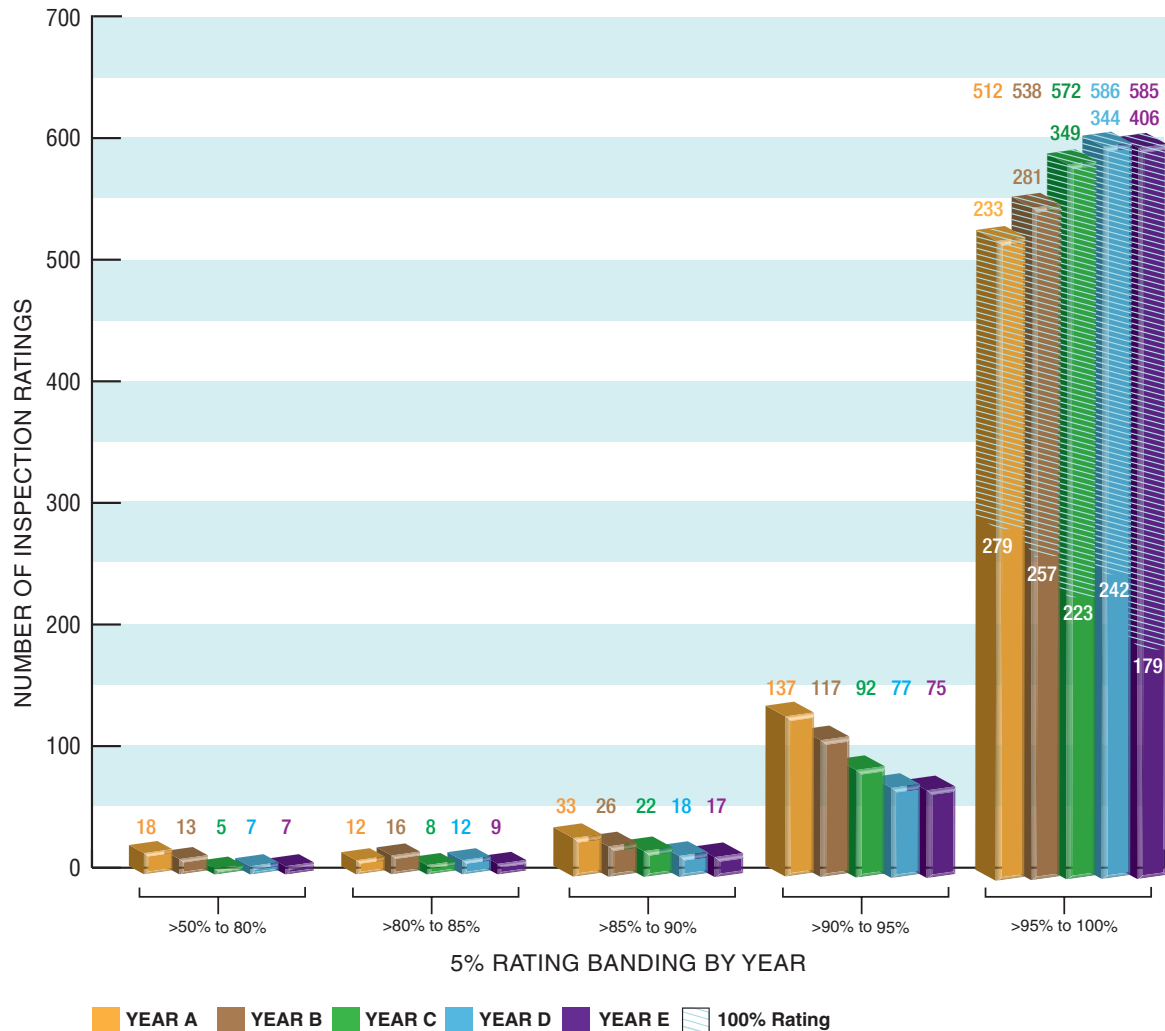
The risk ratings of all non-compliant answers are summed and divided by the sum of the risk ratings of all questions asked (maximum question rating). The resulting inspection risk rating (as a percentage) is subtracted from 100 per cent to arrive at the final inspection rating.

Application of the Methodology for Public Reporting

The individual MRDWS Total Inspection Ratings are published with the ministry’s Chief Drinking Water Inspector’s Annual Report.

Figure 1 presents the distribution of MRDWS ratings for a sample of annual inspections. Individual drinking water systems can compare against all the other inspected facilities over a period of inspection years.

Figure 1: Year Over Year Distribution of MRDWS Ratings



Reporting Results to MRDWS Owners/Operators

A summary of inspection findings for each system is generated in the form of an Inspection Rating Record (IRR). The findings are grouped into the 15 possible modules of the inspection protocol,

which would provide the system owner/operator with information on the areas where they need to improve. The 15 modules are:

- | | | | |
|-------------------------|---------------------------------|--|--|
| 1. Source | 5. Treatment Process Monitoring | 9. Logbooks | 13. Water Quality Monitoring |
| 2. Permit to Take Water | 6. Process Wastewater | 10. Contingency and Emergency Planning | 14. Reporting, Notification and Corrective Actions |
| 3. Capacity Assessment | 7. Distribution System | 11. Consumer Relations | 15. Other Inspection Findings |
| 4. Treatment Processes | 8. Operations Manuals | 12. Certification and Training | |

For further information, please visit www.ontario.ca/drinkingwater

APPENDIX C

KEY REFERENCE AND GUIDANCE MATERIAL FOR MUNICIPAL RESIDENTIAL DRINKING WATER SYSTEMS

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 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/page/drinking-water



Click on the publication below to access it

- [Drinking Water System Profile Information Form - 012-2149E](#)
- [Laboratory Services Notification Form – 012-2148E](#)
- [Adverse Test Result Notification Form – 012-4444E](#)
- [Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils](#)
- [Procedure for Disinfection of Drinking Water in Ontario](#)
- [Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids](#)
- [Filtration Processes Technical Bulletin](#)
- [Ultraviolet Disinfection Technical Bulletin](#)
- [Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments](#)
- [Certification Guide for Operators and Water Quality Analysts](#)
- [Training Requirements for Drinking Water Operator](#)
- [Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption](#)
- [Drinking Water System Contact List – 7128E01](#)
- [Ontario's Drinking Water Quality Management Standard - Pocket Guide](#)
- [2020 Watermain Disinfection Procedure](#)
- [List of Licensed Laboratories](#)