



February 22nd, 2021

Tri-County Water Board
c/o: Magda Badura
22413 Hoskins Line
Rodney, ON N0L 2C0

Re: Requirement under the Safe Drinking Water Act for a Summary Report

Dear Ms. Badura;

Attached is the 2020 Summary Report for the Tri-County Drinking Water System. This report is completed in accordance with Schedule 22 of O. Reg. 170/03, under the Safe Drinking Water Act.

This Summary Report is to be provided to the members of the Tri-County Water Board. Please ensure this distribution by March 31st, 2021.

We recently forwarded a copy of the 2020 Annual Report for the Tri-County Drinking Water System required under Section 11 of O. Reg. 170/03. Section 12 of O. Reg. 170/03, requires both the Summary Report and the Annual Report be made available for inspection by any member of the public during normal business hours, without charge. The reports should be made available for inspection at the office of the municipality, or at a location that is reasonably convenient to the users of the water system.

Please feel free to contact me should you require any additional information regarding these reports. I can be reached at 226-374-4349.

Sincerely,

Maegan Garber

Maegan Garber
Process and Compliance Technician

cc. Mike Taylor, Senior Operations Manager
Dale LeBritton, Regional Hub Manager
Cindy Sigurdson, Safety, Process and Compliance Manager



**Ontario Clean Water Agency
Agence Ontarienne Des Eaux**

**Annual Summary Report
For the
Tri-County Drinking Water System
2020**

Prepared for the Tri-County Water Board

By the Ontario Clean Water Agency

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SECTION 1: Overview

This summary report for the Tri-County Drinking Water System is published in accordance with Schedule 22 of Ontario's Drinking Water Systems Regulation for the reporting period of January 1, 2020 to December 31, 2020. The Tri-County Drinking Water System (DWS) is categorized as a Large Municipal Residential Drinking Water System.

The DWS is owned by the Tri-County Water Board. The system is made up of the Tri-County Water Treatment Plant, the transmission main and the West Lorne Standpipe.

The Tri-County DWS operated in accordance with the Municipal Drinking Water Licence 043-101, Drinking Water Works Permit 043-201 and Permit to Take Water 0515-8L9GX7 (Issued January 20th, 2015).

This report was prepared by The Ontario Clean Water Agency on behalf of the Tri-County Water Board and must be supplied to the Tri-County Water Board by March 31st, 2021.

SECTION 2: Compliance

The Tri-County DWS was operated and maintained in such a manner that treated water supplied to the consumers serviced by the system satisfied Ontario Drinking Water Quality Standards. However, some of the regulatory requirements were not met as identified below.

There was a routine inspection conducted by the Ministry of the Environment, Conservation and Parks (MECP) on December 15, 2020. There was one non-compliance with regulatory requirements identified in the inspection report. The non-compliance as written in the final inspection report is as follows:

1. ***Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was not performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and/or was not recording data with the prescribed format.***

Ontario Regulation 170/03 Schedule 6-5 (1) states that If a drinking water systems uses continuous monitoring equipment for sampling and testing that is required under this Regulation , or under an approval drinking water works permit, municipal drinking water licence or order, for a parameter set out in the Table to this section, the owner of the system and the operating authority of the systems shall ensure that the following standards are met:

1. *The continuous monitoring equipment must, except when no water is being directed to users of water samples by the equipment,*
 - i. *Test for the parameter with at least the minimum frequency specified in the Table for the parameter, and*
 - ii. *Record the date, time, sampling location and the result of every test for the parameter with at least the minimum frequency referred to in subparagraph i.*

On April 3, 2020 the Operating Authority for the Tri-County Drinking Water System notified the Ministry, that on March 29, 2020 the SCADA historian had a failure, likely due to a power surge during a recent windstorm. The Operator had performed the 72-hour check on March 30, and the data was available, but the 72-hour check on March 31, indicated that the data was no longer available. Upon further investigation by the Operating Authority, it was discovered that alarms were operational at the time and called out as needed. The Operating Authority proceeded to contact the contractor who provides SCADA support; however, they were unable to retrieve the missing information. Therefore, no SCADA data exists for March 29 to March 31, 2020.

Action(s) Required:

From herein, the Owner/Operating Authority shall ensure that the requirements stipulated in Schedule 6-5 of O. Reg 170/03 are complied with. At the time of the incident, the Operating Authority was proactively working with the SCADA contractor to determine options on how to better protect the system. Based on the recommendations, the Operating Authority implemented a back-up internal data logger on a separate computer to ensure storage of continuous monitoring data. Compliance with the aforementioned shall be assessed during the next inspection period.

SECTION 3: Corrective Actions

The routine MECP Inspections have an Inspection Rating Record, which evaluates the system to provide information for the owner/operator on areas that need to be improved. The particular areas that were evaluated for the Tri-county Drinking Water System were: Source, Capacity Assessment, Treatment Process, Treatment Process Monitoring, Operations Manuals, Logbooks, Security, Certification and Training, Water Quality Monitoring, Water Quality Assessment, and Reporting and Corrective Actions. This system received 21 out of 461 non-compliance ratings and as such received 95.44% for the Final Inspection Rating.

In response to the non-compliance, the SCADA programmers provided options to better protect the system. The option chosen was to implement a back-up internal data logger on a separate computer to store critical tags for online compliance related equipment at the plant which can be retrieved should there be a failure of the historian. This data is captured in a 72 hour rolling window. It is hard programmed and accessible through the SCADA programmer, Eramosa and can be retrieved up request.

Additionally, there is SCADA condition assessment that will be undertaken in 2021 on all PLC equipment at the water plant, stand pipe, and remote metering chambers.

SECTION 4: Summary and Discussion of Quantity of Water Supplied

In accordance with Schedule 22-2(3) find a summary and discussion of the quantity of water supplied during the reporting period compared to the rated capacity specified in the MDWL, DWWP and Permit to Take Water, including monthly average and maximum daily flows.

Attached as Appendix A, find a summary of the raw flows including total, average, and maximum daily flows, and peak flow rates for the reporting period. As well, a comparison of flows to the Permit to Take Water limits is provided. The Permit to Take Water (PTTW) specifies flow rates and total water takings permitted. For the Tri-County DWS the maximum flow rate limit is 9,400L/min. The total daily water taking is 13,500m³/day. The overall daily taking of water was not exceeded. The Tri-County DWS is at 28.7% capacity for the average daily water taking limit, which is down by 2.3% from last year.

Attached as Appendix B, find a summary of treated water flows including total, average, and maximum daily flows for the reporting period. As well, a comparison of flows to the Municipal Drinking Water Licence (MDWL) rated capacities is provided. The rated capacity of the plant is 12,160m³/day of treated water as specified in the MDWL. The daily average flow for the reporting period was 3,654.1m³/day, which is a decrease by 4.67% from 2019. The maximum daily flow for the reporting period was 6,695.5m³/day. The plant is operating at 30.1% of its rated capacity; this is down from 2019 by 1.4%.

The Tri-County DWS is capable of meeting its current uses for the system. It is operating at well below the limits set out in the Permit to Take Water and the design capacity for the plant.

APPENDIX A

Raw Flows for the Tri-County DWS compared to the specified limits in the Permit to Take Water. The maximum flow rate specified is 9,400L/min (156.7L/s) with a total water taking of 13,500,000L/day.

Month	Total Flow (m³)	Average Day Flow (m³/day)	% of PTTW Limit	Max Day Flow (m³/day)	% of PTTW Limit	Max Day Flow Rates (L/s)	% of PTTW Limit
January	102,148	3,295	24.4	5,060	37.5	132	84.2
February	91,803	3,166	23.5	3,746	27.7	136	86.8
March	91,824	2,962	21.9	4,023	29.8	148	94.4
April	101,736	3,391	25.1	4,849	35.9	140	89.3
May	121,491	3,919	29.0	5,445	40.3	91	58.1
June	151,957	5,065	37.5	6,146	45.5	141	90.0
July	160,664	5,183	38.4	6,829	50.6	135	86.2
August	136,890	4,416	32.7	5,216	38.6	137	87.4
September	125,896	4,197	31.1	4,908	36.4	135	86.2
October	118,891	3,835	28.4	4,684	34.7	134	85.5
November	108,386	3,613	26.8	4,363	32.3	117	74.7
December	107,486	3,467	25.7	4,008	29.7	131	83.6
Total	1,419,171.3						
Average		3,876	28.7				
Maximum				6,829	50.6	148	94.4

APPENDIX B

Treated flows for the Tri-County DWS compared to the specified rated capacity of 12,160m³/day in the Municipal Drinking Water Licence.

Month	Total Flow (m³)	Average Day Flow (m³/day)	% of Rated Capacity	Max Day Flow (m³/day)	% of Rated Capacity
January	96,041	3,098	25.5	4,890	40.2
February	85,174	2,937	24.2	3,848	31.6
March	87,150	2,811	23.1	4,127	33.9
April	97,859	3,262	26.8	4,375	36.0
May	115,728	3,733	30.7	5,300	43.6
June	144,444	4,815	39.6	6,166	50.7
July	152,812	4,929	40.5	6,696	55.1
August	127,287	4,106	33.8	4,868	40.0
September	117,365	3,912	32.2	4,573	37.6
October	111,725	3,604	29.6	4,595	37.8
November	99,787	3,326	27.4	3,912	32.2
December	102,780	3,315	27.3	4,327	35.6
Total	1,338,152				
Average		3,656	30.1		
Maximum				6,696	55.1