

February 5th, 2024

Mr. Jean-François Durocher

Water Inspector
Drinking Water and Environmental Compliance Division
Ministry of the Environment, Conservation and Parks

Subject:

2023 - Annual Report for the St-Isidore Drinking Water System

Dear Mr. Durocher,

Please see attached, the summary report for the St-Isidore Drinking Water System that covers the period from January 1 to December 31, 2023.

This summary report has been completed in accordance with O. Reg. 170/03 Schedule 22 under the Safe Drinking Water Act. The target due date for this report is March 31st, 2024.

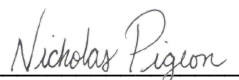
This summary report includes the quantities and flow rates of the water supplied by the Township of Alfred-Plantagenet to The Nation Municipality.

This report is also distributed to the Members of the Municipal Council.

Sincerely,



Sebastien Mainville
Water and Wastewater Manager (acting)



Nicholas Pigeon, CET
Water and Wastewater Director (acting), ORO

In the preparation of this summary report, we have complied with the following requirements:

- List the requirements of the Act, the regulations, the systems approval, drinking water works permit, municipal drinking water license and any orders applicable to the system that were not met at any time during the period covered by the report;
- For each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measurements that were taken to correct the failure;
- A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows;
- A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system approval, drinking water works permit or municipal drinking water license, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5 (4), to the flow rates specified in the written agreement.

Comparison:

During the period of January 1 to December 31, 2023:

- The maximum daily flow to the St-Isidore distribution system was 628 m³/day. This occurred in November, and it represented 49% of the rated available capacity of 1277 m³/day. The rated capacity is the amount of water that has been agreed upon to be supplied from the Alfred-Plantagenet Township to the Nation Municipality.
- The average daily distribution flow in the St. Isidore Drinking Water System was 210 m³/day.



Drinking - Water Systems Regulation O. Reg.170/03

System Information

Drinking Water System Name:	St-Isidore Water Distribution System
Drinking Water System Number:	260091026
Drinking Water System Owner:	The Corporation of the Nation Municipality
Operating Authority:	The Nation municipality
Drinking Water System Category:	Large municipal Residential
Period being reported:	Jan. 1, 2023 to Dec. 31, 2023

Does your Drinking-Water System serve more than 10 000 people?

Yes () No (X)

Is your annual report available to the public at no charge on a web site on the internet?

Yes (X) No ()

Summary Report (170/03 Schedule 22) will be available for inspection at:

<p>The Nation municipality website</p>
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List all Drinking-Water System, which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
N/A	N/A

Did you provide a copy of your annual report to all Drinking Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes () No () N/A (x)

Indicate how you notified system users that your annual report is available, and is free of charge.

<p>(X) Public access / Notice via the web</p> <p>() Public access / notice via government Office</p> <p>() Public access / notice via a newspaper</p> <p>() Public access / notice via Public Request</p> <p>() Public access / notice via a Public Library</p> <p>() Public access / notice via another method _____</p>

Describe your Drinking Water System

The St-Isidore drinking water system is supplied with chloraminated water from the Lefaivre WTP in Alfred-Plantagenet Township. The water first reaches the Plantagenet booster station which consists of: one 84.4 m3 clearwell ; two high lift pumps each rated at 20 L/sec.; a chemical feed system designed to boost the chloramine level when needed; one flow meter; two Cl2 analyzers (free and total); and one 125 KW standby power generator. The high lift pumps deliver water from the clearwell to the water tower in the village of St-Isidore, from where the water is gravity fed to the community. The water tower is equipped with one flow meter; and two Cl2 analyzer (Free and Total) for ongoing residual monitoring. This operation is fully automated and remotely monitored by the SCADA System. Water Operators perform manual checks, log data, take water samples for water quality monitoring, and perform maintenance of the system. This facility operates under C of A # 7256-6NEMJ7.

List all water treatment chemicals used over this reporting period

Chemical Name	Supplier
Sodium Hypochlorite	Brenntag
Ammonium Sulfate	Brenntag
(Primary and secondary disinfection is achieved at Lefaivre WTP)	

Were any significant expenses incurred to?

- () Install required equipment
- (X) Repair required equipment**
- () Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

Calibration of Flow meter	\$	2,000.00
Fire Hydrant inspection and flushing	\$	3,500.00
Replace power supply panel of pump #1	\$	1,500.00
Replace both quill injector on chemical injection	\$	1,200.00
SCADA upgrade - phase 1	\$	85,000.00
Complete rehabilitation of both singer valve	\$	3,500.00

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking Water Act or section 16-4 of schedule 16 of O.Reg.170/03 and reported to Spill Action Centre.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
04-Apr-23	Sodium	22.9	mg/L	Took a second sample and distributed a notice letter to affected resident	28-Apr-23

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of samples	Range of E.Coli Or Fecal Results	Range of Total Coliform Results	Number of HPC samples	Range of HPC Results
		(min#)-(max#)	(min#)-(max#)		(min#)-(max#)
Distribution	156	0 - 0	0 - 0	52	0 - 4

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab samples	Range of Results (min#)-(max#)	For continuous monitors use 8760 as the number of samples.
Chlorine Combined Dist. System	8760	0.51 - 2.99	
Chlorine Combined Dist. System	232	0.49 - 2.80	

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of Legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
N/A				

St-Isidore Drinking Water System

Ontario Regulation 170/03, Section 11 Annual Report 2023

Summary of Inorganic parameters tested during this reporting period or the most recent sample results				
Parameter	Sample date	Result value (mg/L)	Limit (mg/L)	Exceedance
Hardness	04-Apr-23	49.6		
Conductivity	04-Apr-23	220		
Iron	04-Apr-23	0.014		
Magnesium	04-Apr-23	3.68		
Manganese	04-Apr-23	0.006		
Sodium	04-Apr-23	22.9	Health >20 reportable (Limit: 200)	Yes

Summary of Lead testing under Schedule 15.1 during this reporting period

Location Type	Number of samples	Limit of Lead Results	Range of Lead Results		Number of Exceedance
			(min #) - (max #)		
Plumbing	N/A				N/A
Distribution	4	0.01	0.00003	0.00026	No
PH	5	N/A	6.63	7.74	N/A
Alkalinity	5	N/A	30	42	N/A

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample date	Result value (mg/L)	Limit	Exceedance
Trihalomethanes (THM)	2023 RAA	0.041	0.100 mg/L	No
Haloacetic acids (HAA)	2023 RAA	0.034	0.80 mg/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of measure	Date of sample
Chloramines (combined)	Max Value: 2.99	mg/L	Jan - Dec