

February 20th, 2019

Mme. Sarah Young, CET

Water Inspector, Provincial Officer #1888
Drinking Water and Environmental Compliance Division
Ministry of the Environment, Conservation and Parks

Subject:

2018 - Annual Report for the Limoges Drinking Water System

Dear Mme Young:

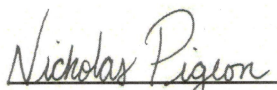
Please see attached, the summary report for the Limoges Drinking Water System that covers the period from January 1st, 2018 to December 31, 2018.

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, 2019.

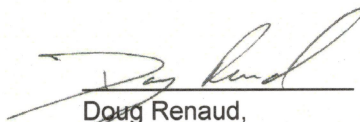
This summary report includes quantities and flow rates of the water supplied to consumers serviced by the Limoges Drinking Water System, including monthly averages; and a comparison to the rated water supply capacity of the system.

This report is also distributed to the Members of the Municipal Council and the Board of Directors of the Nation Municipality.

Sincerely,



Nicholas Pigeon, CET
O.I.C. Water and Wastewater



Doug Renaud,
Director of Water & Wastewater



Desmond Verasammy, CET
Overall Responsible Operator

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, 2018 to December 31, 2018:

- The maximum daily flow to the distribution system was 1626 m³/day. This occurred in July, and it represented 78% of the rated capacity of 2080 m³/day.
- The maximum daily flow from the wells was 1735 m³/day. This occurred in July, and it represented 83% of the rated capacity. In accordance with our PTTW # 1106-968LAR, the maximum rated flow from the wells is 24.1 L/sec or 2080 m³/day.
- The average daily distribution flow was 932 m³/day.



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

System Information

Drinking Water System Name:	Limoges Water Treatment Plant
Drinking Water System Number:	260006841
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 to Dec. 31, 2018

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>Municipal Office The Corporation of the Nation municipality 958 Route 500 West Casselman, ON K0A1M0</p>

List all Drinking-Water System, which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Le Baron Estate	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 (X) No ()

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>(X) Public access / notice via a Public Library</p> <p>() Public access / notice via another method_____</p>

Describe your Drinking Water System

<p>The Limoges water treatment plant is a ground water treatment and supply facility. It has a rated capacity of 2080 m3/day; services the Village of Limoges, the Community of Forest Park, Le Baron Estate, and the Ben Tardiff Trailer Park. Raw water is supplied from two production wells; delivered via a two km watermain into an aeration tower at the water treatment plant. Further treatment is achieved in sequence by chemical oxidation and a dual train chemically assisted filtration process.</p> <p>Primary disinfection is achieved by chlorination followed by chloramination for secondary disinfection. Treated water is stored in a dual onsite water storage towers and then pumped into the distribution system. All processes are fully automated and monitored using a SCADA System.</p> <p>Operators monitor, log data, and maintain operational records of the wells, plant, treatment processes and the distribution systems. They also conduct water quality sampling and testing, and system maintenance.</p>
<p>The Chemical feed systems consist of chemical pumps, storage tanks, piping and associated appurtances to dose potassium permanganate, Alum, Polyelectrolyte, Sodium Hypochlorite and Ammonium Sulphate.</p>

List all water treatment chemicals used over this reporting period

Chemical Name	Supplier
Potassium Permanganate	Brenntag
PAX-XL6	Kemira
Polyelectrolyte	Northland Chemicals Inc.
Sodium Hypochlorite	Brenntag
Ammonium Sulfate	Brenntag

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

Replacement of all pressure gauge and saddles on Booster pumps	\$	1,000.00
Calibration of Flow meter	\$	1,500.00
Changed all butterfly valves for all four filters	\$	12,000.00
Hydrant inspection & Flushing	\$	5,220.00
Valve manipulation on distribution system	\$	2,700.00
New Reservoir at Water treatment plant	\$	850,000.00
New Antenna for Communication at WTP	\$	60,000.00
Replaced all Polypro balls in Aeration Bassin	\$	6,100.00
Replaced 8" Globe valve on Filter 2B	\$	7,000.00
Calibration of analyzers and instruments	\$	1,200.00

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
May 4th	Combined Chlorine	0.21	mg/L	Isolation of reservoir, emptied, re-sampled.	May 4th

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 (min#)-(max#)	Range of Total Coliform Results (min#)-(max#)	Number of HPC samples	Range of HPC Results (min#)-(max#)
Raw Well # 1	52	0 - 0	0 - 0	N/A	N/A
Raw Well # 2	52	0 - 0	0 - 0	N/A	N/A
Treated	52	0 - 0	0 - 0	52	< 2 - 8
Distribution	156	0 - 0	0 - 0	48	< 2 - 12

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#)	<i>For continuous monitors use 8760 as the number of samples.</i>
Turbidity (Raw W1)	4	(0.28) - (3.92)	
Turbidity (Raw W2)	4	(0,12) - (2,33)	
Chlorine Combined Dist. Syst,	8760	(1,15) - (2,40)	
Turbidity (Treated water)	8760	(0,035) - (0,100)	

Note: Record the unit of measure if it is not milligrams per liter. *Average per day of combine chlorine in distribution syst.; min. 1.66 - max. 2.38 mg/L.

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				

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
Antimony	05-Apr-18	<0.0001	0.006	No
Arsenic	05-Apr-18	0.0001	0.01	No
Barium	05-Apr-18	0.558	1	HalfMac
Boron	05-Apr-18	0.048	5	No
Cadmium	05-Apr-18	< 0.000014	0.005	No
Chromium	05-Apr-18	< 0.002	0.05	No
Fluoride		Sample in 2019	1.5	
Mercury	05-Apr-18	0.00007	0.001	No
Selenium	05-Apr-18	< 0.001	0.05	No
Sodium		Sample in 2019	Health >20 reportable (Limit: 200)	
Uranium	05-Apr-18	< 0.0005	0.02	No
Nitrite	Average: 4 samples	< 0.1	1	No
Nitrate	Average: 4 samples	0.25	10	No

Summary of Lead testing under Schedule 15.1 during this reporting period

Location Type	Number of samples	Limit	Range of Lead Results (mg/L)		Number of Exceedance
			(min #)	(max #)	
Plumbing	N/A				N/A
Distribution	6	0.1 mg/L	< 0.00002	0.00009	No
Alkalinity	6		214	247	N/A
pH	6		(8.03 - 8.22)		No

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

Parameter	Sample date	Result value (µg/L)	Conversion in mg/L	Limit (mg/L)	Exceedance
Alachlor	April 5, 2018	<0.3	<0.0003	0.005 mg/L	no
Atrazine + N-dealkylated metabolites	2018-04-05	<0.5	<0.0005	0.005 mg/L	no
Azinphos-methyl	2018-04-05	<1	<0.001	0.02 mg/L	no
Benzene	2018-04-05	<0.5	<0.0005	0.001 mg/L	no
Benzo(a)pyrene	2018-04-05	<0.005	<0.000005	0.00001 mg/L	no
Bromoxynil	2018-04-05	<0.3	<0.0003	0.005 mg/L	no
Carbaryl	2018-04-05	<3	<0.003	0.09 mg/L	no
Carbofuran	2018-04-05	<1	<0.001	0.09 mg/L	no
Carbon Tetrachloride	2018-04-05	<0.2	<0.0002	0.002 mg/L	no
Chlorpyrifos	2018-04-05	<0.5	<0.0005	0.09 mg/L	no
Diazinon	2018-04-05	<1	<0.001	0.02 mg/L	no
Dicamba	2018-04-05	<5	<0.005	0.12 mg/L	no
1,2-Dichlorobenzene	2018-04-05	<0.1	<0.0001	0.2 mg/L	no
1,4-Dichlorobenzene	2018-04-05	<0.2	<0.0002	0.005 mg/L	no
1,2-Dichloroethane	2018-04-05	<0.1	<0.0001	0.005 mg/L	no
1,1-Dichloroethylene (vinylidene chloride)	2018-04-05	<0.1	<0.0001	0.014 mg/L	no
Dichloromethane	2018-04-05	<0.3	<0.0003	0.05 mg/L	no
2,4 Dichlorophenol	2018-04-05	<0.1	<0.0001	0.9 mg/L	no
2,4-Dichlorophenoxy acetic acid (2,4-D)	2018-04-05	<5	<0.005	0.1 mg/L	no
Diclofop-methyl	2018-04-05	<0.5	<0.0005	0.009 mg/L	no
Dimethoate	2018-04-05	<1	<0.001	0.02 mg/L	no
Diquat	2018-04-05	<5	<0.005	0.07 mg/L	no
Diuron	2018-04-05	<5	<0.005	0.15 mg/L	no
Glyphosate	2018-04-05	<25	<0.0025	0.28 mg/L	no
Malathion	2018-04-05	<5	<0.005	0.19 mg/L	no
2-Methyl-4-chlorophenoxyacetic acid (MCP)	2018-04-05	<10	<0.01	0.1 mg/L	no
Metholachlor	2018-04-05	<3	<0.003	0.05 mg/L	no
Metribuzin	2018-04-05	<3	<0.003	0.08 mg/L	no
Monochlorobenzene	2018-04-05	<0.2	<0.0002	0.08 mg/L	no
Paraquat	2018-04-05	<1	<0.001	0.01 mg/L	no
Pentachlorophenol	2018-04-05	<0.1	<0.0001	0.06 mg/L	no
Phorate	2018-04-05	<0.3	<0.0003	0.002 mg/L	no
Picloram	2018-04-05	<5	<0.005	0.19 mg/L	no

Limoges Drinking Water System

Ontario Regulation 170/03, Section 11 Annual Report 2018

Parameter	Sample date	Result value (µg/L)	Conversion in mg/L	Limit (mg/L)	Exceedance
Polychlorinated Biphenyls (PCB)	2018-04-05	<0.05	<0.00005	0.003 mg/L	no
Prometryne	2018-04-05	<0.1	<0.0001	0.001 mg/L	no
Simazine	2018-04-05	<0.5	<0.0005	0.01 mg/L	no
Terbufos	2018-04-05	<0.3	<0.0003	0.001 mg/L	no
Tetrachloroethylene	2018-04-05	<0.2	<0.0002	0.01 mg/L	no
2,3,4,6- Tetrachlorophenol	2018-04-05	<0.1	<0.0001	0.1 mg/L	no
Triallate	2018-04-05	<10	<0.01	0.23 mg/L	no
Trichloroethylene	2018-04-05	<0.1	<0.0001	0.005 mg/L	no
2,4,6- Trichlorophenol	2018-04-05	<0.1	<0.0001	0.005 mg/L	no
Trifluralin	2018-04-05	<0.5	<0.0005	0.045 mg/L	no
Vinyl Chloride	2018-04-05	<0.2	<0.0002	0.001 mg/L	no
THM (Note : show last annual average)			0.039	0.1 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
Barium	0.558	mg/L	april 5 2018

Limoges Drinking Water System

Ontario Regulation 170/03, Section 11 Annual Report 2018