

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	2100001905
Drinking-Water System Name:	Mattawa Drinking Water System
Drinking-Water System Owner:	Town of Mattawa
Drinking-Water System Category:	Large Municipal - Residential
Date of Preparation of this Report:	March 11, 2019
Period being reported:	January 1, 2018 to December 31, 2018

Complete if your Category is Large Municipal Residential or Small Municipal Residential

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 or on a web site on the Internet?

Yes [X] No []

Location where Report required under O. Reg. 170/03 Schedule 22 will be available

Town Hall at 160 Water Street and on the Municipal website at www.mattawa.ca

Complete for all other Categories.

Number of Designated Facilities served:

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes [] No []

Number of Interested Authorities you report to:

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []

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

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 [x] None exist

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

[X] Public access/notice via the web

[X] Public access/notice via Government Office

- ☐ Public access/notice via a newspaper
- ☐ Public access/notice via Public Request
- ☐ Public access/notice via a Public Library
- ☐ Public access/notice via other method _____

Describe your Drinking-Water System

Our system is a Class II Distribution & Supply system consisting of two deep drilled wells housed within one facility. The water is pumped into the distribution system to supply the distribution system's demand for water and fill our 690 Cubic Meter reservoir.

Primary disinfection is achieved by Ultra Violet Reactors. We chlorinate water as it enters the distribution system to maintain prescribed residuals in the distribution system, and to protect it from bacterial re-growth while in the distribution system on its way to users.

List all water treatment chemicals used over this reporting period

Sodium hypochlorite solution (12%).

Were any significant expenses incurred to?

- ☒ Install required equipment
- ☒ Repair required equipment
- ☒ Replace required equipment

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

- Jp2g Consultants attended the water reservoir site on October 24, 2018, to conduct a building condition assessment specifically with regard to the existing structure condition of the Town of Mattawa water reservoir as part of Ontario's Clean Water and Wastewater Fund Program. The reservoir was drained in accordance with the Ministry of the Environment, Conservation and Parks (MECP) as well as American Water Works Association (AWWA) protocols. A visual review of the interior of the reservoir was conducted by Jp2g Consultants Inc. structural Engineer and senior project manager. On completion of review, retrofit improvements were conducted within the reservoir; i.e. the decommissioning of the 10" drain valve and the installation of a 6" drain valve, as well as the installation of a new davit arm support base. An assessment of the concrete reservoir shows that it is in good condition overall.
- A complete replacement of Pump #2 and an air-scouring of Well #2 has been completed by International Water Supply (IWS). The well was inspected with CCTV, disinfected as per MECP instructions and Pump #2 was inserted, set and connected. A brief pumping test was performed to confirm proper operation.

- Upgrades were completed to UV Reactor #1. This included the installation of a new programmable logic controller (PLC) and power supply (H₂Flow Equipment Inc.). As well as programming from Stroma Service Consulting Inc.

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 Spills Action Centre?

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
N/A					

Microbiological testing done under the Schedule 10 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 (#-#)
Raw	104	0 – 0	0 – 10	0	n/a
Treated	52	0 – 0	0 – 0	52	0 – 37
Distribution	156	0 – 0	0 – 0	36	0 – 27

Operational testing done under Schedule 7, 8 or 9 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (#-#)
Turbidity (Raw) #1	12*	0.07 to 0.44
Turbidity (Raw) #2	12*	0.07 to 0.37
Chlorine (Dist.)	365	0.11 to 1.18

NOTE: For continuous monitors use 8760 as the number of samples.

*OCWA discovered that the monthly well turbidities were not taken within the 20-40 day period required by O. Reg. 170. The Town of Mattawa will make best efforts to sample well turbidities during the first week of month.

Fluoride (If the DWS provides fluoridation)	N / A	N / A
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NOTE: Record the unit of measure if it is **not** milligrams per litre.

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

Date of order or C of A	Parameter	Date Sampled	Result	Unit of Measure
N/A				

Summary of Lead Test parameters, per Schedule 15.1 of O.Reg. 170/03 sampled during this reporting period or most recent.

Parameter	Sample #	Sample Date	Result Value	Unit of Measure	Exceedance
Lead	1	April 12/18	<0.0001	mg/L	No
	2	April 12/18	<0.0001	mg/L	No
	1	Aug.9/18	0.0002	mg/L	No
	2	Aug.9/18	0.0005	mg/L	No
pH	1	April 12/18	7.07		
	2	April 12/18	6.89		
	1	Aug.9/18	6.60		
	2	Aug.9/18	6.75		
Alkalinity	1	April 12/18	42.4	mg/L	No
	2	April 12/18	42.4	mg/L	No
	1	Aug.9/18	42.3	mg/L	No
	2	Aug.9/18	42.5	mg/L	No

Summary of Inorganic parameters, per Schedule 23 of O.Reg. 170/03, tested during this reporting period or most recent.

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	July 31 / 18	<0.001	mg/L	No
Arsenic	July 31 / 18	<0.001	mg/L	No
Barium	July 31 / 18	0.03	mg/L	No
Boron	July 31 / 18	0.01	mg/L	No
Cadmium	July 31 / 18	<0.0001	mg/L	No
Chromium	July 31 / 18	<0.001	mg/L	No
Mercury	July 31 / 18	<0.0001	mg/L	No
Selenium	July 31 / 18	<0.001	mg/L	No
Uranium	July 31 / 18	<0.001	mg/L	No
Fluoride	January 16/18	<0.15	mg/L	No
Sodium	January 16/18	13	mg/L	No
Nitrite	Jan. 16 / 18	<0.1	mg/L	No
	Apr. 12 / 18	<0.1	mg/L	No
	July 31 / 18	<0.1	mg/L	No
	Oct. 30 / 18	<0.1	mg/L	No
Nitrate	Jan. 16 / 18	1.46	mg/L	No
	Apr. 12 / 18	1.47	mg/L	No
	July 31 / 18	1.62	mg/L	No
	Oct. 30 / 18	1.27	mg/L	No

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

Summary of Organic parameters, per Schedule 24 of O.Reg. 170/03 sampled during this reporting period or most recent.

See *Appendix A* for Schedule 24 sample results.

THM	1 st Quarter Result	2 nd Quarter Result	3 rd Quarter Result	4th Quarter Result	Unit of Measure	Exceedance
Date Sampled	Jan 16-2018	Apr 12-2018	Jul 31-2018	Oct 30-2018		
Total Trihalomethanes	<0.002	0.0029	0.0038	0.0025	mg/L	No
Total Trihalomethanes 4 Quarter Average (for 2018)				0.0028	mg/L	No

Haloacetic Acids (HHA's)	1 st Quarter Result	2 nd Quarter Result	3 rd Quarter Result	4th Quarter Result	Unit of Measure	Exceedance
Date Sampled	Jan 16-2018	Apr 12-2018	Jul 31-2018	Oct 30-2018		
Total Haloacetic Acids	<0.002	<0.002	<0.002	0.0024	mg/L	No
Total Haloacetic Acids 4 Quarter Average (for 2018)				0.0021	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	M.A.C.
N/A				

Appendix A

Statement of Analytical Results - Final

Job 110913
Mattawa, Town of
210001905 - MATTAWA DRINKING WATER SYSTEM

Dan Finnigan

160 WATER ST, PO BOX 390, MATTAWA ON P0H 1V0

Lab ID		18G2192		Criteria		Reg 170			
Collection Date		2018-Jul-31				Sampler		Josh Dewaal	
Collection Time		10:40				Received		2018 Jul 31 14:50	
Matrix		Treated Water		Criteria		Turn Around		7 Day	
Description		WTP Treated Water: 400 Bissett St.		SDWA / Ont. Reg. 170/03		MDL / RDL		Units	
								Method	
								Completed	
								Analyst	
Antimony, total	<0.001	-	-	0.006	0.001	mg/L	ICP	2018-Sep-05	-
Arsenic, total	<0.001	-	-	0.025	0.001	mg/L	ICP/MS	2018-Sep-05	-
Barium, total	0.03	-	-	1.0	0.001	mg/L	ICP/MS	2018-Sep-05	-
Boron, total	0.01	-	-	5.0	0.002	mg/L	ICP/MS	2018-Sep-05	-
Cadmium, total	<0.0001	-	-	0.005	0.0001	mg/L	ICP/MS	2018-Sep-05	-
Chromium, total	<0.001	-	-	0.05	0.001	mg/L	ICP/MS	2018-Sep-05	-
Mercury, total	<0.0001	-	-	0.001	0.0001	mg/L	ICP	2018-Sep-05	-
Selenium, total	<0.001	-	-	0.01	0.001	mg/L	ICP	2018-Sep-05	-
Uranium, total	<0.001	-	-	0.02	0.001	mg/L	ICP/OES	2018-Sep-05	-
Dichloroethylene	<0.0005	-	-	0.014	0.0005	mg/L	GC/MS	2018-Sep-05	-
1,2-Dichlorobenzene	<0.0004	-	-	0.2	0.0004	mg/L	GC/MS	2018-Sep-05	-
1,2-Dichloroethane	<0.0002	-	-	0.005	0.0002	mg/L	GC/MS	2018-Sep-05	-
1,4-Dichlorobenzene	<0.0004	-	-	0.005	0.0004	mg/L	GC/MS	2018-Sep-05	-
Benzene	<0.0005	-	-	0.001	0.0005	mg/L	GC/MS	2018-Sep-05	-
Carbon tetrachloride	<0.0002	-	-	0.005	0.0002	mg/L	GC/MS	2018-Sep-05	-
Dichloromethane	0.004	-	-	0.05	0.004	mg/L	GC/MS	2018-Sep-05	-
Monochlorobenzen e ²	<0.0005	-	-	0.08	0.0005	mg/L	GC/MS	2018-Sep-05	-
Tetrachloroethylen e ²	<0.0003	-	-	0.030	0.0003	mg/L	GC/MS	2018-Sep-05	-
Trichloroethylene ²	<0.0003	-	-	0.005	0.0003	mg/L	GC/MS	2018-Sep-05	-
Vinyl chloride ²	<0.0002	-	-	0.002	0.0002	mg/L	GC/MS	2018-Sep-05	-
2 methyl-4-chlorophenoxyacetic acid (MCPA)	<0.010	-	-	-	0.010	mg/L	GC/MS	2018-Sep-05	-
2,3,4,6-Tetrachlorophenol	<0.001	-	-	0.100	0.001	mg/L	GC/MS	2018-Sep-05	-
2,4-D	<0.001	-	-	0.100	0.001	mg/L	GC/ECD	2018-Sep-05	-
2,4-Dichlorophenol	<0.0002	-	-	0.900	0.0002	mg/L	GC/MS	2018-Sep-05	-
2,4,6-Trichlorophenol	<0.001	-	-	0.005	0.0010	mg/L	GC/MS	2018-Sep-05	-

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Collection Time		10:40		Received		2018 Jul 31 14:50				
Matrix		Treated Water		Turn Around		7 Day				
Description		WTP Treated Water: 400 Bissett St.		Criteria SDWA / Ont. Reg. 170/03		MDL / RDL	Units	Method	Completed	Analyst
Alachlor	<0.0005	-	-	0.005	0.0005	mg/L	GC/MS	2018-Sep-05	-	-
Atrazine + N-dealkylated metabolites	<0.001	-	-	0.005	0.001	mg/L	Calculation	2018-Sep-05	-	-
Azinphos-methyl	<0.002	-	-	0.02	0.002	mg/L	GC/MS	2018-Sep-05	-	-
Benzo(a)pyrene	<0.00001	-	-	0.00001	0.00001	mg/L	GC/MS	2018-Sep-05	-	-
Bromoxynil	<0.0005	-	-	0.005	0.0005	mg/L	GC/ECD	2018-Sep-05	-	-
Carbaryl	<0.005	-	-	0.09	0.005	mg/L	HPLC	2018-Sep-05	-	-
Carbofuran	<0.005	-	-	0.09	0.005	mg/L	HPLC	2018-Sep-05	-	-
Chlorpyrifos	<0.001	-	-	0.09	0.001	mg/L	GC/MS	2018-Sep-05	-	-
Cyfluthrin	<0.001	-	-	0.02	0.001	mg/L	GC/MS	2018-Sep-05	-	-
Dicamba	<0.001	-	-	0.12	0.001	mg/L	GC/ECD	2018-Sep-05	-	-
Diclofop-methyl	<0.0009	-	-	0.009	0.0009	mg/L	GC/ECD	2018-Sep-05	-	-
Dimethoate	<0.0025	-	-	0.02	0.0025	mg/L	GC/MS	2018-Sep-05	-	-
Diquat	<0.005	-	-	0.07	0.005	mg/L	HPLC	2018-Sep-05	-	-
Diuron	<0.01	-	-	0.15	0.01	mg/L	HPLC	2018-Sep-05	-	-
Glyphosate	<0.01	-	-	0.28	0.01	mg/L	HPLC	2018-Sep-05	-	-
Malathion ²	<0.005	-	-	0.19	0.005	mg/L	GC/MS	2018-Sep-05	-	-
Metolachlor ²	<0.001	-	-	0.05	0.001	mg/L	GC/MS	2018-Sep-05	-	-
Metribuzin ²	<0.005	-	-	0.08	0.005	mg/L	GC/MS	2018-Sep-05	-	-
Paraquat ²	<0.001	-	-	0.01	0.001	mg/L	HPLC	2018-Sep-05	-	-
Polychlorinated Biphenyls (PCBs) ²	<0.0001	-	-	0.003	0.0001	mg/L	GC/ECD	2018-Sep-05	-	-
Pentachlorophenol ²	<0.001	-	-	0.06	0.001	mg/L	GC/MS	2018-Sep-05	-	-
Phorate ²	<0.0005	-	-	0.002	0.0005	mg/L	GC/MS	2018-Sep-05	-	-
Picloram ²	<0.005	-	-	0.19	0.005	mg/L	GC/ECD	2018-Sep-05	-	-
Prometryne ²	<0.00025	-	-	0.001	0.00025	mg/L	GC/MS	2018-Sep-05	-	-
Simazine ²	<0.001	-	-	0.01	0.001	mg/L	GC/MS	2018-Sep-05	-	-
Terbufos ²	<0.0004	-	-	0.001	0.0004	mg/L	GC/MS	2018-Sep-05	-	-
Triallate ²	<0.001	-	-	0.23	0.001	mg/L	GC/MS	2018-Sep-05	-	-
Trifluralin ²	<0.001	-	-	0.045	0.001	mg/L	GC/MS	2018-Sep-05	-	-

Statement of Analytical Results - Final**Job 110913****Mattawa, Town of****210001905 - MATTAWA DRINKING WATER SYSTEM**

Dan Finnigan

160 WATER ST, PO BOX 390, MATTAWA ON P0H 1V0

MDL denotes Method Detection Limit, and expresses the lowest concentration that can be detected for the analysis

[R] Indicates Reported Detection Limit (RDL) used in place of an MDL

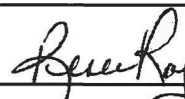
* Sample diluted prior to analysis

¹ Indicates an accredited test by Near North Laboratories Inc. to CALA to ISO/IEC 17025. ² Indicates analyses were subcontracted to an accredited and licensed laboratory.

Preparation: All samples were processed in accordance with the Occupational Health and Safety Act. Analyses performed by a N.I.S.T. - NVLAP accredited analyst and in accordance to Regulation 830/90 O.H.S.A., Ontario Ministry of Labour.

QC report available upon request. Sample(s) received in good condition, unless otherwise noted.

Near North Laboratories Inc. does not accept liability for the collection/handling of samples; nor representation and custody of samples prior to submission to the laboratory; the only exception to this statement is for samples collected/handled/in custody of NNL staff from the time of sampling. It is agreed that if Near North Laboratories Inc. should be found liable for any losses or damages attributable to the services provided, the liability shall be limited to and not exceed the amount of the fee paid by the Client for the services; this limit of liability may constitute the re-test / re-provision of the service or a refund of the fee paid.



2018 Sep 06

Renée Roy, Quality Manager

