

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

OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	220004803
Drinking-Water System Name:	Marmora Water Treatment Plant
Drinking-Water System Owner:	The Corporation of the Municipality of Marmora and Lake
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2009 to December 31, 2009

Complete for all other Categories.

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 on a web site on the Internet? Yes [X] No []

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

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 []

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

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

Drinking Water System Name	Drinking Water System Number
NONE	

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 []

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

[X] Public access/notice via the web

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Public access/notice via a newspaper

Describe your Drinking-Water System

The Marmora Water Treatment Plant is a surface water dual train conventional filtration plant. Primary disinfection is achieved through static in-line mixer for coagulation (using PAC), flocculation, and clarification, dual media filtration, followed by GAC polishing filtration. Pathogenic inactivation is achieved using Ultra Violet light application. Secondary disinfection is achieved using sodium hypochlorite. Backwash water is directed to a backwash holding tank, and ultimately disposed of in the sanitary sewer. This facility has on-line continuous, alarmed monitoring for free chlorine residual and filter effluent turbidity. The facility is also equipped with plant lock outs in the event of a UV failure, disinfection failure or in the event that the filter effluent exceeds 0.80 NTU for >10 minutes.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite – 12%

Polyaluminum chloride

Polymer (Magnafloc LT27a)

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

- Annual flow monitors calibration, approx \$1,000.00
- Spare parts and rebuild kits for chem. Feed pumps, approx \$1500.00
- Annual UV maintenance sensors, bulbs, approx \$4,000.00
- Membrane caps & spare free chlorine probe, approx \$1,200.00
- Rebuilt two high lift pumps \$25,000.00

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 Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
April 20/09	Plumbing Lead Exceedance	12.3	ug/L	Notify home owner, Health Unit, supply home with educational information	April 20/09
April 9/09	Operational observations (Water Main Break)	0	psi	Temp. water supply, two consecutive clear samples	April 16/09

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	Tecumseh Area			for E.C. & T.C.	
Oct. 16/09	Plumbing Lead Exceedances	82.6	ug/l	Notify home owner, Health Unit, supply home with educational information	Oct. 16/09
Nov. 6/09	Operational observations (Water Main Break) Victoria St. North	0	psi	Repaired leak, flushed dead ends & sampled for EC/ TC on affected area	Nov. 7/09

**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	52	0-51	35-108	0	n/a
Treated	52	0-0	0-0	52	0-0
Distribution	140	0-0	0-0	100	0-8

Operationa l 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 #)
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Turbidity, Filter Effluent #1	8760	0.00-5.0 NTU
Turbidity, Filter Effluent #2	8760	0.00-5.0 NTU
Free Chlorine, Treated	8760	0.00-5.00
Free Chlorine, Distribution	359	0.2-2.2
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, order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
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Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Type (DW, TW, RAW)	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	TW	Jan 19, 2009	0.09	ug/L	no
Arsenic	TW	Jan 19, 2009	0.4	ug/L	no
Barium	TW	Jan 19, 2009	30.1	ug/L	No
Boron	TW	Jan 19, 2009	7.3	ug/L	No
Cadmium	TW	Jan 19, 2009	0.003<MDL	ug/L	No
Chromium	TW	Jan 19, 2009	0.8	ug/L	No
*Lead	TW	Jan 19, 2009		ug/L	No
Mercury	TW	Jan 19, 2009	0.02<MDL	ug/L	No
Selenium	TW	Jan 19, 2009	1<MDL	ug/L	No
Uranium	TW	Jan 19, 2009	0.029	ug/L	No
Fluoride	TW	Jan 19, 2009	0.06<MDL	mg/L	no
Nitrite	TW	Jan 19, 2009	<0.005	mg/L	No
	TW	April 6, 2009	<0.005	mg/l	No
	TW	July 6, 2009	<0.005	mg/l	No
	TW	Oct 5, 2009	<0.005	mg/l	No
Nitrate	TW	Jan 19, 2009	0.013	mg/L	No
	TW	April 6, 2009	0.070	mg/l	No
	TW	July 6, 2009	0.047	mg/l	No
	TW	Oct 5, 2009	0.033	mg/l	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period
(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing	28	0.00022-0.0826	2
Distribution	4	0.00004-0.00228	0

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

Parameter	Sample Type (DW, TW, RAW)	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	TW	Jan 19, 2009	0.11 <MDL	ug/l	no
Aldicarb	TW	Jan 19, 2009	0.3 <MDL	ug/l	no
Aldrin + Dieldrin	TW	Jan 19, 2009	0.067 <MDL	ug/l	no
Atrazine + N-dealkylated metabolites	TW	Jan 19, 2009	0.12 <MDL	ug/l	no
Azinphos-methyl	TW	Jan 19, 2009	0.21 <MDL	ug/l	no
Bendiocarb	TW	Jan 19, 2009	0.13 <MDL	ug/l	no
Benzene	TW	Jan 19, 2009	0.37 <MDL	ug/l	no
Benzo(a)pyrene	TW	Jan 19, 2009	0.004 <MDL	ug/l	no
Bromoxynil	TW	Jan 19, 2009	0.33 <MDL	ug/l	no
Carbaryl	TW	Jan 19, 2009	0.16 <MDL	ug/l	no
Carbofuran	TW	Jan 19, 2009	0.37 <MDL	ug/l	no
Carbon Tetrachloride	TW	Jan 19, 2009	0.41 <MDL	ug/l	no
Chlordane (Total)	TW	Jan 19, 2009	0.11 <MDL	ug/l	no
Chlorpyrifos	TW	Jan 19, 2009	0.18 <MDL	ug/l	no
Cyanazine	TW	Jan 19, 2009	0.18 <MDL	ug/l	no
Diazinon	TW	Jan 19, 2009	0.081 <MDL	ug/l	no
Dicamba	TW	Jan 19, 2009	0.20 <MDL	ug/l	no
1,2-Dichlorobenzene	TW	Jan 19, 2009	0.50 <MDL	ug/l	no
1,4-Dichlorobenzene	TW	Jan 19, 2009	0.21 <MDL	ug/l	no

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Dichlorodiphenyltrichloro ethane (DDT) + metabolites	TW	Jan 19, 2009	0.14 <MDL	ug/l	no
1,2-Dichloroethane	TW	Jan 19, 2009	0.43 <MDL	ug/l	no
1,1-Dichloroethylene (vinylidene chloride)	TW	Jan 19, 2009	0.41 <MDL	ug/l	no
Dichloromethane	TW	Jan 19, 2009	0.34 <MDL	ug/l	no
2-4 Dichlorophenol	TW	Jan 19, 2009	0.15 <MDL	ug/l	no
2,4-Dichlorophenoxy acetic acid (2,4-D)	TW	Jan 19, 2009	0.19 <MDL	ug/l	no
Diclofop-methyl	TW	Jan 19, 2009	0.40 <MDL	ug/l	no
Dimethoate	TW	Jan 19, 2009	0.12 <MDL	ug/l	no
Dinoseb	TW	Jan 19, 2009	0.36 <MDL	ug/l	no
Diquat	TW	Jan 19, 2009	1 <MDL	ug/l	no
Diuron	TW	Jan 19, 2009	0.087 <MDL	ug/l	no
Glyphosate	TW	Jan 19, 2009	6 <MDL	ug/l	no
Heptachlor + Heptachlor Epoxide	TW	Jan 19, 2009	0.11 <MDL	ug/l	no
Lindane (Total)	TW	Jan 19, 2009	0.056 <MDL	ug/l	no
Malathion	TW	Jan 19, 2009	0.091 <MDL	ug/l	no
Methoxychlor	TW	Jan 19, 2009	0.14 <MDL	ug/l	no
Metolachlor	TW	Jan 19, 2009	0.092 <MDL	ug/l	no
Metribuzin	TW	Jan 19, 2009	0.12 <MDL	ug/l	no
Monochlorobenzene	TW	Jan 19, 2009	0.58 <MDL	ug/l	no
Paraquat	TW	Jan 19, 2009	1 <MDL	ug/l	no
Parathion	TW	Jan 19, 2009	0.18 <MDL	ug/l	no
Pentachlorophenol	TW	Jan 19, 2009	0.15 <MDL	ug/l	no

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Phorate	TW	Jan 19, 2009	0.11 <MDL	ug/l	no
Picloram	TW	Jan 19, 2009	0.25 <MDL	ug/l	no
Polychlorinated Biphenyls(PCB)	TW	Jan 19, 2009	0.04 <MDL	ug/l	no
Prometryne	TW	Jan 19, 2009	0.23 <MDL	ug/l	no
Simazine	TW	Jan 19, 2009	0.15 <MDL	ug/l	no
THM (NOTE: show latest annual average)	DW – Booster Station	Average of Jan 19, Apr 6, July 6, Oct 5, 2009	30.25	ug/l	no
Temephos	TW	Jan 19, 2009	0.31 <MDL	ug/l	no
Terbufos	TW	Jan 19, 2009	0.12 <MDL	ug/l	no
Tetrachloroethylene	TW	Jan 19, 2009	0.45 <MDL	ug/l	no
2,3,4,6-Tetrachlorophenol	TW	Jan 19, 2009	0.14 <MDL	ug/l	no
Triallate	TW	Jan 19, 2009	0.10 <MDL	ug/l	no
Trichloroethylene	TW	Jan 19, 2009	0.38 <MDL	ug/l	no
2,4,6-Trichlorophenol	TW	Jan 19, 2009	0.25 <MDL	ug/l	no
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	TW	Jan 19, 2009	0.22 <MDL	ug/l	no
Trifluralin	TW	Jan 19, 2009	0.12 <MDL	ug/l	no
Vinyl Chloride	TW	Jan 19, 2009	0.17 <MDL	ug/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
n/a	n/a	n/a	n/a