#### Ministry of the Ministère de Environment l'Environnement

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

#### **ANNUAL REPORT (Section 11)**

Drinking-Water System Number: Drinking-Water System Name: Drinking-Water System Owner: Drinking-Water System Category: Period being reported:

210000149
Amherstburg Water Treatment Plant
Corporation of the Town of Amherstburg
Large municipal residential system
January 1, 2008 to December 31, 2008

Complete if your Category is Large Municipal Residential or Small Municipal Residential	Complete for all other Categories.
Does your Drinking-Water System serve more than 10,000 people? Yes [x] No [ ]	Number of Designated Facilities served:
Is your annual report available to the public at no charge on a web site on the Internet?  Yes [x] No [ ]	Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]
Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.	Number of Interested Authorities you report to:
Amherstburg Water Treatment Plant Town of Amherstburg	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:

<b>Drinking Water System Name</b>	<b>Drinking Water System Number</b>

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  $[\times]$  No  $[\ ]$ 

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



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[>	<b>〈</b> ]	<b>Public</b>	access/notice	via	the web
[	]	Public	access/notice	via	Government Office
[	]	Public	access/notice	via :	a newspaper
[	]	<b>Public</b>	access/notice	via 🛚	Public Request
[	]	<b>Public</b>	access/notice	via :	a Public Library
ſ	1	<b>Public</b>	access/notice	via	other method

### **Describe your Drinking-Water System**

A surface water treatment plant, with a rated capacity of 18,184 cubic meters per day, consisting of:

- 1. An intake crib 155 meters into the Detroit River and connected through a 900mm pipe to the Low Lift Pumping Station.
- 2. A low lift pumping station equipped with wet well, three vertical turbine pumps, a coarse bar screen, an automatic traveling screen and two 50mm chlorine solution feed lines and a chlorine diffuser.
- 3. A solids-contact upflow clarifier with overflow chamber, chemical feed line, sludge blow off line, sludge scraper and recirculation system.
- 4. Four rapid sand filters with dual media of anthracite and silica sand including a backwash system.
- 5. A filter effluent clearwell with transfer conduit to the reservoir.
- 6. A 14900m<sup>3</sup> underground storage reservoir.
- 7. A high lift pumping station equipped with three vertical turbine pumps, a fluoride feed line/diffuser, a chlorine solution feed line/diffuser and a filter backwash pump.

### List all water treatment chemicals used over this reporting period

- 1. Aluminum Sulphate
- 2. Powdered Activated carbon
- 3. Chlorine gas
- 4. Hydrofluosilicic acid
- **5.** Polymer (Nalco 8103)
- **6.** Polymer (Nalco **8184**)
- **7. Polymer (Nalco 8181)**

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### Were any significant expenses incurred to?

- [x] Install required equipment
- [x] Repair required equipment
- [x] Replace required equipment

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

Installed: 1) Reservoir Level Measuremax Multiranger - \$1,694.94

2) Heating System at Water Tower - \$4,326.82

3) Man Down Alarms – 11,518.50

Repaired: 1) Chlorinator Repair Parts - \$2,689.19

2) Re-Point Mortar on South and East Walls - \$3,477.60

3) Removal of Asbestos - \$5,124.00

4) High Lift Hoist Tractor Drive - \$6,812.35

5) Filter Troughs Repairs - \$7,025.55

6) Generator Repairs - \$1,479.71

7) Controls for Backwash Pump - \$1,012.54

8) Repairs to MCC - \$1,235.70

Replaced: 1) Chlorine Room Hoist - \$1,403.19

2) Online Fluoride Analyzer - \$7,707.50

3) Online chlorine Analyzer - \$3,542.70

4) Paperless Data Recorder - \$3,575.32

5) Laboratory Spectrophotometer - \$2,321.22

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	Parameter	Result	Unit of Measure	Corrective Action	Corrective
Date					Action Date
04/2008	Monthly Backwash and Clarification/ Sedimentation Testing	Missing	mg/L	Due to Lab error Duplicate samples are taken every month to comply with Certificate of Approval #8120- 53VMF5 under Monitoring and Recording section 2 subsection 2.1 (g) (ii).	05/2008

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

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	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 #)	Number of Background Samples	Range of Background Results (min #)-(max #)
Raw	53	8 - 3,400	34–68,000	0	0 - 0	53	760-100,000
Treated	53	0 - 0	0 - 0	53	0 - 2	53	0 - 1
Distribution	424	0-0	0 - 0	212	0 - 67	424	0 - 24

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 #)
Turbidity	8760	0.02 – 0.935 NTU
Chlorine	8760	0.86 – 2.20 mg/L
Fluoride (If the DWS provides fluoridation)	8760	0.21 – 1.34 mg/L

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

**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	Parameter	Date Sampled	Result	Unit of Measure
issued				
	Nitrilotriacetic Acid	07/08/2008	< 0.03	mg/L
	Backwash/wastewater			
C of A	Suspended Solid	12/04/2008	222	mg/L
#8120-53VMF5	Free Chlorine	12/04/2008	1.60	mg/L
Dated on	Suspended Solid	11/03/2008	46	mg/L
01/07/2002	Free Chlorine	11/03/2008	0.43	mg/L
Amondod to	Suspended Solid	10/07/2008	75	mg/L
Amended to	Free Chlorine	10/07/2008	1.55	mg/L
C of A	Suspended Solid	09/07/2008	242	mg/L
#0896-7JHHW8	Free Chlorine	09/07/2008	0.19	mg/L
Dated on	Suspended Solid	08/11/2008	468	mg/L
09/22/2008	Free Chlorine	08/11/2008	0.09	mg/L
	Suspended Solid	07/08/2008	400	mg/L
	Free Chlorine	07/08/2008	0.15	mg/L
	Suspended Solid	06/02/2008	1080	mg/L
	Free Chlorine	06/02/2008	0.10	mg/L



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Suspended Solid	05/05/2008	2060	mg/L
Free Chlorine	05/05/2008	0.03	mg/L
Suspended Solid	04/07/2008		mg/L
Free Chlorine	04/07/2008	0.15	mg/L
Suspended Solid	03/04/2008	534	mg/L
Free Chlorine	03/04/2008	0.17	mg/L
Suspended Solid	02/25/2008	1370	mg/L
Free Chlorine	02/25/2008	0.08	mg/L
Suspended Solid	01/07/2008	318	mg/L
Free Chlorine	01/07/2008	0.18	mg/L

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	07/08/2008	0.19	μg/L	No
Arsenic	07/08/2008	0.5	μg/L	No
Barium	07/08/2008	15.1	μg/L	No
Boron	07/08/2008	21.8	μg/L	No
Cadmium	07/08/2008	0.01	μg/L	No
Chromium	07/08/2008	0.5	μg/L	No
Lead	07/08/2008	1.13(dist.sys.)	μg/L	No
Mercury	07/08/2008	< 0.02	μg/L	No
Selenium	07/08/2008	<1	μg/L	No
Sodium	07/08/2008	6.88	μg/L	No
Uranium	07/08/2008	0.108	μg/L	No
Fluoride	07/08/2008	0.29	mg/L	No
Nitrite	10/07/2008	< 0.005		
	07/08/2008	< 0.005	mg/L	No
	04/01/2008	< 0.005		
	01/07/2008	< 0.005		
Nitrate	10/07/2008	0.320		
	07/08/2008	0.408	mg/L	No
	04/01/2008	7.5		
	01/07/2008	0.553		

<sup>\*</sup>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

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### 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)

<b>Location Type</b>	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing	129	0.0004mg/L- Min	1
		0.0252mg/L- Max	
Distribution	68	0.00002mg/L-Min	0
		0.00250mg/L-Max	

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	07/08/2008	< 0.11	μg/L	No
Aldicarb	07/08/2008	< 0.30	μg/L	No
Aldrin + Dieldrin	07/08/2008	< 0.067	μg/L	No
Atrazine + N-dealkylated metobolites	07/08/2008	< 0.12	μg/L	No
Azinphos-methyl	07/08/2008	< 0.21	μg/L	No
Bendiocarb	07/08/2008	< 0.13	μg/L	No
Benzene	07/08/2008	< 0.37	μg/L	No
Benzo(a)pyrene	07/08/2008	< 0.004	μg/L	No
Bromoxynil	07/08/2008	< 0.33	μg/L	No
Carbaryl	07/08/2008	< 0.16	μg/L	No
Carbofuran	07/08/2008	< 0.37	μg/L	No
Carbon Tetrachloride	07/08/2008	<0.41	μg/L	No
Chlordane (Total)	07/08/2008	< 0.11	μg/L	No
Chlorpyrifos	07/08/2008	< 0.18	μg/L	No
Cyanazine	07/08/2008	< 0.18	μg/L	No
Diazinon	07/08/2008	< 0.081	μg/L	No
Dicamba	07/08/2008	< 0.20	μg/L	No
1,2-Dichlorobenzene	07/08/2008	< 0.5	μg/L	No
1,4-Dichlorobenzene	07/08/2008	< 0.21	μg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	07/08/2008	<0.14	μg/L	No
1,2-Dichloroethane	07/08/2008	< 0.43	μg/L	No
1,1-Dichloroethylene (vinylidene chloride)	07/08/2008	< 0.41	μg/L	No
Dichloromethane	07/08/2008	< 0.34	μg/L	No
2-4 Dichlorophenol	07/08/2008	< 0.15	μg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	07/08/2008	<0.19	μg/L	No



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Diclofop-methyl	07/08/2008	< 0.40	μg/L	No
Dimethoate	07/08/2008	< 0.12	μg/L	No
Dinoseb	07/08/2008	< 0.36	μg/L	No
Diquat	07/08/2008	<1	μg/L	No
Diuron	07/08/2008	< 0.087	μg/L	No
Glyphosate	07/08/2008	<6	μg/L	No
Heptachlor + Heptachlor Epoxide	07/08/2008	< 0.11	μg/L	No
Linadane (Total)	07/08/2008	< 0.056	μg/L	No
Malathion	07/08/2008	< 0.091	μg/L	No
Methoxychlor	07/08/2008	< 0.14	μg/L	No
Metolachlor	07/08/2008	< 0.092	μg/L	No
Metribuzin	07/08/2008	< 0.12	μg/L	No
Monochlorobenzene	07/08/2008	< 0.58	μg/L	No
Paraquat	07/08/2008	<1	μg/L	No
Parathion	07/08/2008	< 0.18	μg/L	No
Pentachlorophenol	07/08/2008	< 0.15	μg/L	No
Phorate	07/08/2008	< 0.11	μg/L	No
Picloram	07/08/2008	< 0.25	μg/L	No
Polychlorinated Biphenyls(PCB)	07/08/2008	< 0.04	μg/L	No
Prometryne	07/08/2008	< 0.23	μg/L	No
Simazine	07/08/2008	< 0.15	μg/L	No
THM	2008	26	μg/L	No
(NOTE: show latest annual average)		(Dist.Sys.)		
Temephos	07/08/2008	< 0.31	μg/L	No
Terbufos	07/08/2008	< 0.12	μg/L	No
Tetrachloroethylene	07/08/2008	< 0.45	μg/L	No
2,3,4,6-Tetrachlorophenol	07/08/2008	< 0.14	μg/L	No
Triallate	07/08/2008	< 0.10	μg/L	No
Trichloroethylene	07/08/2008	< 0.38	μg/L	No
2,4,6-Trichlorophenol	07/08/2008	< 0.25	μg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	07/08/2008	< 0.22	μg/L	No
Trifluralin	07/08/2008	< 0.12	μg/L	No
Vinyl Chloride	07/08/2008	< 0.17	μg/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
Nitrate	7.5	mg/L	04/01/2008

(Only if DWS category is large municipal residential, small municipal residential, large municipal non residential, non municipal year round residential, large non municipal non residential)