



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

Drinking-Water System Number:	210000149
Drinking-Water System Name:	Amherstburg Water Treatment Plant
Drinking-Water System Owner:	Corporation of the Town of Amherstburg
Drinking-Water System Category:	Large municipal residential system
Period being reported:	January 1, 2015 to December 31, 2015

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> Amherstburg Area Water Treatment Plant Town of Amherstburg </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input style="width: 50px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Number of Interested Authorities you report to: <input style="width: 50px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes <input type="checkbox"/> No <input type="checkbox"/></p>
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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

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.

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper



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- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public 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 14900m³ underground storage reservoir.
7. A high lift pumping station equipped with three vertical turbine pumps, 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. Polymer (Nalco 8103)
5. Polymer (Nalco 7763)
6. Polymer (Nalco 8181)

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

Installed:

1. Phasor- Rebuild Raw water pump #3 and install 100hp VFD - \$ 23,820.24
2. Security Cameras and Monitor - \$ 2,813.03
3. Security One- supply & install security system at Water Tower - \$ 1,998.96

Repaired:

1. Advanced Fluid Technologies- repair stuffing box on LL pump #2- \$2,925.60
2. Genrep Ltd - generator repairs and maintenance - \$1,660.33
3. Clarifier repairs - \$2,870.39
4. Kent compressors- compressor repairs - \$1,014.88



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| 5. ASL Roteq- rebuild low lift Johnston VTP - \$15,166.32
6. Phasor- <u>Rebuild Raw water pump #3</u> and install 100hp VFD - \$23,820.24

Replace:
1. Metcon-flow meter equipment- \$ 1,538.40
2. Empire Roofing- replacement of skylights on low lift building - \$ 7,021.44 |
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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
March 17, 2015	AWQI – Loss of Alum Feed during power interruption	N/A	N/A	Chemical feed pumps were restored and plant process returned to normal.	Issue of Resolution – March 17, 2015
September 23, 2015	Total Coliforms/E. Coli	NDOGN	CFU/100 mL	Re-sample upstream, downstream and at sample station for two sets of samples. Health unit to issue Boil Water Advisory for Boblo Island only. Replaced all internal parts to sample station.	Issue of Resolution – September 25, 2015

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

	No. of Samples Collected for period being reported	Range of E.Coli Or Fecal Results		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Results	
		Minimum #	Maximum #	Minimum #	Maximum #		Minimum #	Maximum #
Raw Water	52	<10	480	58	3500	0	N/A	N/A
Treated Water	52	0	0	0	0	52	<10	<10
Distribution Water	422	0	0	0	0	214	<10	<10



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

	No. of Samples Collected for period being reported	Range of Results	
		Minimum	Maximum
Turbidity, In-House (NTU) - RW	365	1.9	85.4
Turbidity, In-House (NTU) - TW	365	0.02	0.18
Turbidity, On-Line (NTU) - Filt1	8760	0.022	0.362
Turbidity, On-Line (NTU) - Filt2	8760	0.022	0.8
Turbidity, On-Line (NTU) - Filt3	8760	0.018	0.288
Turbidity, On-Line (NTU) - Filt4	8760	0.02	0.172
Free Chlorine Residual, On-Line (mg/L) - TW	8760	0.94	1.32
Free Chlorine Residual, On-Line (mg/L) - PreD	8760	0.9	1.84

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

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
License Number 026-101 Dated on 03/12/2010	Nitrilotriacetic Acid	07/14/2015	<0.03	mg/L
	Backwash/wastewater Suspended Solid	12/03/2015	470	mg/L
	Free Chlorine	12/03/2015	0.10	mg/L
	Backwash/wastewater Suspended Solid	11/03/2015	576	mg/L
	Free Chlorine	11/03/2015	0.21	mg/L
	Backwash/wastewater Suspended Solid	10/04/2015	1130	mg/L
	Free Chlorine	10/04/2015	0.07	mg/L
	Backwash/wastewater Suspended Solid	09/01/2015	250	mg/L
	Free Chlorine	09/01/2015	0.06	mg/L
	Backwash/wastewater Suspended Solid	08/27/2015	58	mg/L
	Free Chlorine	08/27/2015	1.12	mg/L

	Backwash/wastewater Suspended Solid	07/07/2015	1170	mg/L
	Free Chlorine	07/07/2015	0.04	mg/L
	Backwash/wastewater Suspended Solid	06/03/2015	78	mg/L
	Free Chlorine	06/03/2015	0.09	mg/L
	Backwash/wastewater Suspended Solid	05/05/2015	35	mg/L
	Free Chlorine	05/05/2015	1.08	mg/L
	Backwash/wastewater Suspended Solid	04/07/2015	223	mg/L
	Free Chlorine	04/07/2015	0.07	mg/L
	Backwash/wastewater Suspended Solid	03/03/2015	170	mg/L
	Free Chlorine	03/03/2015	0.53	mg/L
	Backwash/wastewater Suspended Solid	02/03/2015	260	mg/L
	Free Chlorine	02/03/2015	0.67	mg/L
	Backwash/wastewater Suspended Solid	01/05/2015	620	mg/L
	Free Chlorine	01/05/2015	0.03	mg/L

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

TREATED WATER	Sample Date (mm/dd/yyyy)	Sample Result	MAC	No. Exceeded	
				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW	7/14/2015	0.13	6.0	No	No
Arsenic: As (ug/L) - TW	7/14/2015	0.3	25.0	No	No
Barium: Ba (ug/L) - TW	7/14/2015	16.7	1000.0	No	No
Boron: B (ug/L) - TW	7/14/2015	16.7	5000.0	No	No
Cadmium: Cd (ug/L) - TW	7/14/2015	0.007	5.0	No	No
Chromium: Cr (ug/L) - TW	7/14/2015	0.14	50.0	No	No
Mercury: Hg (ug/L) - TW	7/14/2015	0.02	1.0	No	No
Selenium: Se (ug/L) - TW	7/14/2015	0.15	10.0	No	No
Uranium: U (ug/L) - TW	7/14/2015	0.025	20.0	No	No
Additional Inorganics					
Fluoride (mg/L) - TW	7/14/2015	0.09	1.5	No	No
Nitrite (mg/L) - TW	1/12/2015	< 0.003	1.0	No	No
Nitrite (mg/L) - TW	4/8/2015	< 0.003	1.0	No	No
Nitrite (mg/L) - TW	7/14/2015	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	10/5/2015	<MDL 0.003	1.0	No	No



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Nitrate (mg/L) - TW	1/12/2015	0.857	10.0	No	No
Nitrate (mg/L) - TW	4/8/2015	0.652	10.0	No	No
Nitrate (mg/L) - TW	7/14/2015	0.626	10.0	No	No
Nitrate (mg/L) - TW	10/5/2015	0.183	10.0	No	No
Sodium: Na (mg/L) - TW	7/14/2015	6650	20*	Yes	Yes

*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 Results		MAC (ug/L)	No. Exceeded
		Minimum	Maximum		
Distribution Water - Lead Results (ug/L)	5	0.55	1	10	0
Distribution Water - Alkalinity (mg/L)	4	69	88	n/a	n/a

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

TREATED WATER	Sample Date (mm/dd/yyyy)	Sample Result	MAC	No. Exceeded	
				MAC	1/2 MAC
Alachlor (ug/L) - TW	7/14/2015	<MDL 0.02	5.00	No	No
Aldicarb (ug/L) - TW	7/14/2015	<MDL 0.01	9.00	No	No
Aldrin+Dieldrin (ug/L) - TW	7/14/2015	<MDL 0.01	0.70	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	7/14/2015	0.100	5.00	No	No
Azinphos-methyl (ug/L) - TW	7/14/2015	<MDL 0.05	20.00	No	No
Bendiocarb (ug/L) - TW	7/14/2015	<MDL 0.01	40.00	No	No
Benzene (ug/L) - TW	7/14/2015	<MDL 0.32	5.00	No	No
Benzo(a)pyrene (ug/L) - TW	7/14/2015	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	7/14/2015	<MDL 0.33	5.00	No	No
Carbaryl (ug/L) - TW	7/14/2015	<MDL 0.05	90.00	No	No
Carbofuran (ug/L) - TW	7/14/2015	<MDL 0.01	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	7/14/2015	<MDL 0.16	5.00	No	No
Chlordane: Total (ug/L) - TW	7/14/2015	<MDL 0.01	7.00	No	No
Chlorpyrifos (ug/L) - TW	7/14/2015	<MDL 0.02	90.00	No	No
Cyanazine (ug/L) - TW	7/14/2015	<MDL 0.03	10.00	No	No

Diazinon (ug/L) - TW	7/14/2015	<MDL 0.02	20.00	No	No
Dicamba (ug/L) - TW	7/14/2015	<MDL 0.2	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW	7/14/2015	<MDL 0.41	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW	7/14/2015	<MDL 0.36	5.00	No	No
DDT + metabolites (ug/L) - TW	7/14/2015	<MDL 0.01	30.00	No	No
1,2-Dichloroethane (ug/L) - TW	7/14/2015	<MDL 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	7/14/2015	<MDL 0.33	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	7/14/2015	<MDL 0.35	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	7/14/2015	<MDL 0.15	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	7/14/2015	<MDL 0.19	100.00	No	No
Diclofop-methyl (ug/L) - TW	7/14/2015	<MDL 0.4	9.00	No	No
Dimethoate (ug/L) - TW	7/14/2015	<MDL 0.03	20.00	No	No
Dinoseb (ug/L) - TW	7/14/2015	<MDL 0.36	10.00	No	No
Diquat (ug/L) - TW	7/14/2015	<MDL 1.0	70.00	No	No
Diuron (ug/L) - TW	7/14/2015	<MDL 0.03	150.00	No	No
Glyphosate (ug/L) - TW	7/14/2015	<MDL 1.0	280.00	No	No
Heptachlor+hepachlor epoxide (ug/L) - TW	7/14/2015	<MDL 0.01	3.00	No	No
Lindane (ug/L) - TW	7/14/2015	<MDL 0.01	4.00	No	No
Malathion (ug/L) - TW	7/14/2015	<MDL 0.02	190.00	No	No
Methoxychlor (ug/L) - TW	7/14/2015	<MDL 0.01	900.00	No	No
Metolachlor (ug/L) - TW	7/14/2015	0.110	50.00	No	No
Metribuzin (ug/L) - TW	7/14/2015	<MDL 0.02	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	7/14/2015	<MDL 0.3	80.00	No	No
Paraquat (ug/L) - TW	7/14/2015	<MDL 1.0	10.00	No	No
Parathion (ug/L) - TW	7/14/2015	<MDL 0.02	50.00	No	No
PCB (ug/L) - TW	7/14/2015	<MDL 0.04	3.00	No	No
Pentachlorophenol (ug/L) - TW	7/14/2015	<MDL 0.15	60.00	No	No
Phorate (ug/L) - TW	7/14/2015	<MDL 0.01	2.00	No	No
Picloram (ug/L) - TW	7/14/2015	<MDL 1.0	190.00	No	No
Prometryne (ug/L) - TW	7/14/2015	<MDL 0.03	1.00	No	No
Simazine (ug/L) - TW	7/14/2015	<MDL 0.01	10.00	No	No
Temephos (ug/L) - TW	7/14/2015	<MDL 0.01	280.00	No	No
Terbufos (ug/L) - TW	7/14/2015	<MDL 0.01	1.00	No	No
Tetrachloroethylene (ug/L) - TW	7/14/2015	<MDL 0.35	30.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	7/14/2015	<MDL 0.2	100.00	No	No
Triallate (ug/L) - TW	7/14/2015	<MDL 0.01	230.00	No	No



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Trichloroethylene (ug/L) - TW	7/14/2015	<MDL 0.44	50.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW	7/14/2015	<MDL 0.25	5.00	No	No
2,4,5-T (ug/L) - TW	7/14/2015	<MDL 0.22	280.00	No	No
Trifluralin (ug/L) - TW	7/14/2015	<MDL 0.02	45.00	No	No
Vinyl Chloride (ug/L) - TW	7/14/2015	<MDL 0.17	2.00	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	1/1/2015	23.25	100.00	No	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			