

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

Part III Form 2

Section 11. ANNUAL REPORT.

Drinking-Water System Number:	210000791
Drinking-Water System Name:	Lake Huron Primary Water Supply System
Drinking-Water System Owner:	Lake Huron Primary Water Supply System Joint Board of Management c/o the City of London
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2005 through December 31, 2005

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 ☐

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

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

City of London
Regional Water Supply Division
29 Kilworth Park Dr., RR 5, Komoka, ON
<http://watersupply.london.ca>

Lake Huron Water Treatment Plant
71155A Bluewater Highway, Grand Bend, Ont.

Complete for all other Categories.

Number of Designated Facilities served:

N/A

Did you provide a copy of your annual report to all Designated Facilities you serve? Yes ☐ No ☐

Number of Interested Authorities you report to:

N/A

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:

<u>Drinking Water System Name</u>	<u>Drinking Water System Number</u>
City of London	260004917
Municipality of Bluewater	260006542
Municipality of Lambton Shores	260006568
Township of Lucan-Biddulph	260003071
Township of Middlesex Center	260004202
Municipality of North Middlesex	260006529
Municipality of South Huron	260006555

Township of Strathroy-Caradoc	220002173
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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

☐ Public access/notice via Public Request

☐ Public access/notice via a Public Library

☒ Public access/notice via other method News Release

Describe your Drinking-Water System

The Lake Huron Water Treatment Plant (WTP) employs pre-chlorination, screening, powder activated carbon addition (seasonally on an as-required basis), coagulation, flocculation, sedimentation, dual-media filtration, and post-chlorination to treat raw water obtained from Lake Huron. The WTP has an estimated gross capacity of 454.6 Megalitres/day (MLD) and a current rated capacity of 340.0 MLD. Water is pumped from the plant through 1200 mm diameter water main, sections of which are twinned, to various communities en route to a terminal reservoir located to the north of the City of London. The drinking water system is monitored at various locations throughout the system via a Supervisory Control and Data Acquisition (SCADA) system.

List all water treatment chemicals used over this reporting period

Filter aid polymer (on an as-required basis)
Acidified alum
Powder activated carbon
Dewatering polymer
Chlorine gas

Were any significant expenses incurred to?

☒ Install required equipment

☒ Repair required equipment

☒ Replace required equipment

Describe

Replaced filter rate valve actuator
Replaced 3 turbidity analyzers

Replaced 4 free chlorine analyzers
 Installed 7 particle counters with OPC software
 SCADA upgrades to capture particle counter data and Strathroy Caradoc pipeline
 Rewound and rewired back wash pump
 Rebuilt building boiler recirculation pumps
 Replaced high lift sump pump
 Carried out arc-flash analysis on plant MCC's
 Carried out high voltage maintenance on plant main switch gear
 Replaced filter media in #5 filter
 Installed new service tie-in from main line to service Strathroy-Caradoc

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 18, 2005	HPC	>1500	cfu/1ml	Resample, increase chlorine dosage	April 22, 2005

Microbiological testing done under section 8 (2) 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	103	0 – 100	0 – 9,600	103	<10 - >2000
Treated	253	0 – 0	0 – 0	252	<10 - >1,500
Distribution	315	0 -0	0 -0	54	0 – 330

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 (NTU)	8760	0.014 – 0.101
Chlorine	8760	0.73 – 1.47
Fluoride (If the DWS provides fluoridation)		

***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 or order.

Date of order or C of A	Parameter	Date Sampled	Result	Unit of Measure
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Summary of Inorganic parameters tested during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	28 March 05	Not Detected	mg/L	
Arsenic	28 March 05	Not Detected	mg/L	
Barium	28 March 05	0.016	mg/L	
Boron	28 March 05	0.016	mg/L	
Cadmium	28 March 05	Not Detected	mg/L	
Chromium	28 March 05	0.0018	mg/L	
Lead	28 March 05	Not Detected	mg/L	
Mercury	28 March 05	Not Detected	mg/L	
Selenium	28 March 05	Not Detected	mg/L	
Sodium	25 March 04	<0.002	mg/L	
Uranium	28 March 05	Not Detected	mg/L	
Fluoride	25 March 04	<0.1	mg/L	
Nitrite	28 March 05 16 June 05 8 September 05 12 December 05	Not Detected Not Detected Not Detected Not Detected	mg/L	
Nitrate	28 March 05 16 June 05 8 September 05 12 December 05	0.9 0.4 Not Detected 0.3	mg/L	

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	28 March 05	Not Detected	mg/l	
Aldicarb	28 March 05	Not Detected	mg/l	
Aldrin + Dieldrin	28 March 05	Not Detected		
Atrazine + N-dealkylated metabolites	28 March 05	Not Detected	mg/l	
Azinphos-methyl	28 March 05	Not Detected	mg/l	
Bendiocarb	28 March 05	Not Detected	mg/l	
Benzene	31 March 05	Not Detected	mg/l	
Benzo(a)pyrene	28 March 05	Not Detected	mg/l	
Bromoxynil	28 March 05	Not Detected	mg/l	
Carbaryl	28 March 05	Not Detected	mg/l	
Carbofuran	28 March 05	Not Detected	mg/l	
Carbon Tetrachloride	28 March 05	Not Detected	mg/l	
Chlordane (Total)	28 March 05	Not Detected		
Chlorpyrifos	28 March 05	Not Detected	mg/l	
Cyanazine	28 March 05	Not Detected	mg/l	
Diazinon	28 March 05	Not Detected	mg/l	
Dicamba	28 March 05	Not Detected	mg/l	
1,2-Dichlorobenzene	31 March 05	Not Detected	mg/l	
1,4-Dichlorobenzene	31 March 05	Not Detected	mg/l	

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Dichlorodiphenyltrichloroethane (DDT) + metabolites	28 March 05	Not Detected	mg/l	
1,2-Dichloroethane	28 March 05	Not Detected	mg/l	
1,1-Dichloroethylene (vinylidene chloride)	28 March 05	Not Detected	mg/l	
Dichloromethane	28 March 05	Not Detected	mg/l	
2-4 Dichlorophenol	28 March 05	Not Detected	mg/l	
2,4-Dichlorophenoxy acetic acid (2,4-D)	28 March 05	Not Detected	mg/l	
Diclofop-methyl	28 March 05	Not Detected	mg/l	
Dimethoate	28 March 05	Not Detected	mg/l	
Dinoseb	28 March 05	Not Detected	mg/l	
Diquat	28 March 05	Not Detected	mg/l	
Diuron	28 March 05	Not Detected	mg/l	
Glyphosate	28 March 05	Not Detected	mg/l	
Heptachlor + Heptachlor Epoxide	28 March 05	Not Detected		
Lindane (Total)	28 March 05	Not Detected	mg/l	
Malathion	28 March 05	Not Detected	mg/l	
Methoxychlor	28 March 05	Not Detected	mg/l	
Metolachlor	28 March 05	Not Detected	mg/l	
Metribuzin	28 March 05	Not Detected	mg/l	
Monochlorobenzene	28 March 05	Not Detected	mg/l	
Paraquat	28 March 05	Not Detected	mg/l	
Parathion	28 March 05	Not Detected	mg/l	
Pentachlorophenol	28 March 05	Not Detected	mg/l	
Phorate	28 March 05	Not Detected	mg/l	
Picloram	28 March 05	Not Detected	mg/l	
Polychlorinated Biphenyls(PCB)	28 March 05	Not Detected	mg/l	
Prometryne	28 March 05	Not Detected	mg/l	
Simazine	28 March 05	Not Detected	mg/l	
THM (NOTE: show latest annual average)	2005 Average	0.0126	mg/l	
Temephos	28 March 05	Not Detected	mg/l	
Terbufos	28 March 05	Not Detected	mg/l	
Tetrachloroethylene	31 March 05	Not Detected	mg/l	
2,3,4,6-Tetrachlorophenol	28 March 05	Not Detected	mg/l	
Triallate	28 March 05	Not Detected	mg/l	
Trichloroethylene	31 March 05	Not Detected	mg/l	
2,4,6-Trichlorophenol	28 March 05	Not Detected	mg/l	
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	28 March 05	Not Detected	mg/l	
Trifluralin	28 March 05	Not Detected	mg/l	
Vinyl Chloride	31 March 05	Not Detected	mg/l	

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

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