

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, 2007 through December 31, 2007

<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 []</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 []</p> <p>Location where Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> Lake Huron and Elgin Area Water Supply Systems c/o Regional Water Supply Division 29 Kilworth Park Dr., RR 5, Komoka, ON http://www.watersupply.london.ca </div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Lake Huron Water Treatment Plant 71155A Bluewater Highway, Grand Bend, ON </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <div style="border: 1px solid black; padding: 2px; width: 100px; text-align: center;">N/A</div> </p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No [] </p> <p>Number of Interested Authorities you report to: <div style="border: 1px solid black; padding: 2px; width: 100px; text-align: center;">N/A</div> </p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No [] </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:

Systems that receive their drinking water directly from the LHPWSS:

<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 Strathroy-Caradoc	260080106

Municipality of South Huron	260006555
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Systems that receive their drinking water indirectly from the LHPWSS:

<u>Drinking Water System Name</u>	<u>Drinking Water System Number</u>
Huron Park Distribution System	210003048
Exeter Water Supply System	220001520
Theford Water	210000425

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 intake crib and raw water intake pipe have an estimated gross capacity of 454.6 Megalitres/day (MLD). The WTP rated capacity is 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
Lake Huron Water Treatment Plant:

Controls for the discharge header valve for HLP No.'s 4 and 5 were repaired
 Repaired check valves on surge tanks
 Backwash Pump No.7 replaced
 One of the yolks on the chlorine system was replaced
 Leak on chlorine manifold was repaired
 Backwash valve actuator was installed on filter No.12
 New turbidity meters were installed on filter No.'s 11 and 12
 Valve positioner for High Lift Pump No.1 was repaired
 Leak was detected and repaired on the caustic system for the chlorine scrubber
 Powdered Activated Carbon pump was rebuilt
 Low Lift Pump No.3 was taken out of service for motor repairs
 Repairs were completed to the control room air conditioning unit for the control room. At this time the set up on the new air conditioning units for the MCC room were also completed.

McGillivray Booster Pumping Station:

Repair capacitors of HLP No's. 2, 3 and 4
 Repair leak on compressor #2 heat exchanger
 Repair to standby generator rear bearing
 Replacement of pressure relief valves on surge tanks

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
May 29, 2007	E.Coli and Total Coliform	No Data Overgrowth (NDOG)	CFU/100mL	Took samples downstream of adverse sample point. Also re-sampled at location of adverse sample. Increased free chlorine residual by 10% for a few consecutive days	May 31, 2007

***NOTE:** It is believed that the adverse sample was a result of either a labeling or lab error, or sample contamination. Samples that were taken previous and subsequent to the erroneous samples were not adverse.*

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	101	(0) – (50)	(0) – (3,000)	100	(<10) – (>2,000)
Treated	259	(0) – (NDOG*)	(0) – (NDOG*)	259	(<10) – (340)
Distribution	302	(0) – (0)	(0) – (0)	302	(<10) – (110)

*NDOG – No Data Overgrowth

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

	Number of Grab Samples (Continuous Monitoring)	Result Statistics		
		Min	Max	Avg.
Turbidity (NTU)	525600	0.01	2.07	0.03
Chlorine (mg/L)	525600	0.81	1.61	1.07

NOTE: There were a few instances in 2007 when the treated water turbidity exceeded 1.00 NTU. On one occasion, the treated water turbidity on SCADA read more than 1.00 NTU for seven minutes, but the in-house lab result was 0.16 NTU. Due to temporary technical difficulties in the electronic recording system, it is believed that the in-house lab result was more representative of the treated water turbidity compared to the SCADA reading. On two other occasions, the treated water turbidity spiked to more than 1.00 NTU, but the spikes did not last longer than two minutes.

Note: Approximately one data point for every minute during 2007 was used to obtain the free chlorine residual statistics reported above.

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

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	January 2, 2007	Not Detected	µg/L	
Arsenic	January 2, 2007	Not Detected	µg/L	
Barium	January 2, 2007	27	µg/L	

Boron	January 2, 2007	13	µg/L	
Cadmium	January 2, 2007	Not Detected	µg/L	
Chromium	January 2, 2007	Not Detected	µg/L	
Lead	July 4, 2007	Not Detected	µg/L	
Mercury	January 2, 2007	Not Detected	mg/L	
Selenium	January 2, 2007	Not Detected	µg/L	
Sodium	January 30, 2006	4.1	mg/L	
Uranium	January 2, 2007	Not Detected	µg/L	
Fluoride	25 March, 2004	<0.1	mg/L	
Nitrite	January 2, 2007 April 3, 2007 July 4, 2007 October 2, 2007	Not Detected Not Detected Not Detected Not Detected	mg/L	
Nitrate	January 2, 2007 April 3, 2007 July 4, 2007 October 2, 2007	0.3 0.5 0.2 0.2	mg/L	

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	January 2, 2007	Not Detected	µg/L	
Aldicarb	January 2, 2007	Not Detected	µg/L	
Aldrin + Dieldrin	January 2, 2007	Not Detected	µg/L	
Atrazine + N-dealkylated metabolites	January 2, 2007	Not Detected	µg/L	
Azinphos-methyl	January 2, 2007	Not Detected	µg/L	
Bendiocarb	January 2, 2007	Not Detected	µg/L	
Benzene	January 2, 2007	Not Detected	µg/L	
Benzo(a)pyrene	January 2, 2007	Not Detected	µg/L	
Bromoxynil	January 2, 2007	Not Detected	µg/L	
Carbaryl	January 2, 2007	Not Detected	µg/L	
Carbofuran	January 2, 2007	Not Detected	µg/L	
Carbon Tetrachloride	January 2, 2007	Not Detected	µg/L	
Chlordane (Total)	January 2, 2007	Not Detected	µg/L	
Chlorpyrifos	January 2, 2007	Not Detected	µg/L	
Cyanazine	January 2, 2007	Not Detected	µg/L	
Diazinon	January 2, 2007	Not Detected	µg/L	
Dicamba	January 2, 2007	Not Detected	µg/L	
1,2-Dichlorobenzene	January 2, 2007	Not Detected	µg/L	
1,4-Dichlorobenzene	January 2, 2007	Not Detected	µg/L	
Dichlorodiphenyltrichloroethane (DDT) + metabolites	January 2, 2007	Not Detected	µg/L	
1,2-Dichloroethane	January 2, 2007	Not Detected	µg/L	
1,1-Dichloroethylene (vinylidene chloride)	January 2, 2007	Not Detected	µg/L	
Dichloromethane	January 2, 2007	Not Detected	µg/L	
2-4 Dichlorophenol	January 2, 2007	Not Detected	µg/L	
2,4-Dichlorophenoxy acetic acid (2,4-D)	January 2, 2007	Not Detected	µg/L	

Diclofop-methyl	January 2, 2007	Not Detected	µg/L	
Dimethoate	January 2, 2007	Not Detected	µg/L	
Dinoseb	January 2, 2007	Not Detected	µg/L	
Diquat	January 2, 2007	Not Detected	µg/L	
Diuron	January 2, 2007	Not Detected	µg/L	
Glyphosate	January 2, 2007	Not Detected	µg/L	
Heptachlor + Heptachlor Epoxide	January 2, 2007	Not Detected	µg/L	
Lindane (Total)	January 2, 2007	Not Detected	µg/L	
Malathion	January 2, 2007	Not Detected	µg/L	
Methoxychlor	January 2, 2007	Not Detected	µg/L	
Metolachlor	January 2, 2007	Not Detected	µg/L	
Metribuzin	January 2, 2007	Not Detected	µg/L	
Monochlorobenzene	January 2, 2007	Not Detected	µg/L	
Paraquat	January 2, 2007	Not Detected	µg/L	
Parathion	January 2, 2007	Not Detected	µg/L	
Pentachlorophenol	January 2, 2007	Not Detected	µg/L	
Phorate	January 2, 2007	Not Detected	µg/L	
Picloram	January 2, 2007	Not Detected	µg/L	
Polychlorinated Biphenyls(PCB)	January 2, 2007	Not Detected	µg/L	
Prometryne	January 2, 2007	Not Detected	µg/L	
Simazine	January 2, 2007	Not Detected	µg/L	
THM (NOTE: show latest annual average)	October 2, 2007	0.0119	mg/L	
Temephos	January 2, 2007	Not Detected	µg/L	
Terbufos	January 2, 2007	Not Detected	µg/L	
Tetrachloroethylene	January 2, 2007	Not Detected	µg/L	
2,3,4,6-Tetrachlorophenol	January 2, 2007	Not Detected	µg/L	
Triallate	January 2, 2007	Not Detected	µg/L	
Trichloroethylene	January 2, 2007	Not Detected	µg/L	
2,4,6-Trichlorophenol	January 2, 2007	Not Detected	µg/L	
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	January 2, 2007	Not Detected	µg/L	
Trifluralin	January 2, 2007	Not Detected	µg/L	
Vinyl Chloride	January 2, 2007	Not Detected	µg/L	

Note: No inorganic or organic parameters exceeded half the standard prescribed in Schedule 2 of the Ontario Drinking Water Quality Standards.