

**Part III Form 2
Section 11. ANNUAL REPORT.**

Drinking-Water System Number:	220003421
Drinking-Water System Name:	Windsor Utilities Commission
Drinking-Water System Owner:	City of Windsor
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	Calendar Year 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 [X] No []</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []</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;"> City of Windsor – City Hall 350 City Hall Square Windsor ON N9A 6S1 </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input style="width: 100px; height: 20px;" type="text"/></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: <input style="width: 100px; 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 [] 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:

Drinking Water System Name	Drinking Water System Number
Town of LaSalle, Ontario	220004402
Town of Tecumseh, Ontario	260004969

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 [X] 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

Describe your Drinking-Water System

The Windsor Utilities Commission water treatment facilities employs screening, pre-chlorination (on an as needed basis), pH adjustment (utilizing CO₂), primary disinfection (utilizing ozone), coagulation, flocculation, sedimentation, dual-media filtration with post chlorination and fluoridation to treat raw water obtained from the Detroit River. The water treatment plant also treats sedimentation sludge and backwash water utilizing coagulation, flocculation and sedimentation followed by centrifugal dewatering with the cake being shipped to landfill for disposal.

Treated water from the plants is routed to an on-site reservoir and subsequently pumped into the distribution system from two pumping stations that are co-located nearby the water treatment facilities. Water from the pumping stations satisfies demand for the greater Windsor area including the communities of Tecumseh and LaSalle. A remote reservoir and pumping station provides re-chlorination facilities (using sodium hypochlorite) to provide system pressure and flow to the south-west portion of the city, while a centrally located water tower, provides pressure and flow control to the downtown core.

The drinking water system is monitored at various locations, both at the water treatment and pumping stations as well as throughout the transmission system, via a Supervisory Control and Data Acquisition (SCADA) system.

List all water treatment chemicals used over this reporting period

Chlorine gas
 Carbon dioxide (CO₂)
 Ozone
 Aluminum sulphate (alum)
 Polyaluminum chloride (PaCl)
 Hydrofluosilicic acid
 Filter aid cationic polymer

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

Process Analyzer replacements

Continued with equipment guarding replacement for rotating equipment

Installation of approximately 13.0 km of new water main (100 mm to 900 mm)

Structurally relined 0.5 km of 150 mm main

Cement relined 0.6 km of 150 mm main

Installation of 32 new fire hydrants and associated appurtenances

Rebuild of George Avenue pumping station high lift pump #1 control valve

Relocated and updated in-process laboratory

New drive installed on flocculation mixer

New drive and motor rewind on submersible wastewater pump in lamellar settler

Complete overhaul of Ozone generators and distribution header assemblies

Nitrogen generator rebuild

Electrical upgrade to side stream pump feeders

Exterior building maintenance to treatment plant and pumping station façades

Constructed secure computer server room and relocation of SCADA computers

Relay calibration for standby generator protective circuits

Replacement of electrical transformer and automated generator transfer switch at pumping station

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
Jan 19 07	Free chlorine – AWQI 69854	0.00	mg/L	Flushed & re-sampled	Jan 22 07
Jan 22 07	Free chlorine – AWQI 69879	0.01	mg/L	Flushed & re-sampled	Jan 22 07
Jan 23 07	Free chlorine – AWQI 69888	0.01	mg/L	Flushed & re-sampled	Jan 23 07
Jan 25 07	None – AWQI 69912 - broken water service on customer property			Health Unit issued BWA, repaired, flushed & re-sampled	Feb 21 07
Jan 26 07	None – damaged water service line. AWQI – AC001			Health Unit issued BWA, repaired, flushed & re-sampled	Jan 29 07
Feb 2 07	Total Coliform – AWQI 70041 (replaced CA001)	TC =4 EC overgrown	/100 mL	Re-sampled – No BWA issued as high chlorine up and down stream; believed to be point source contamination	Feb 05 07
Feb 13 07	None – broken water pipes under vacant house. AWQI 70112			Re-sampled. No BWA issued.	Feb 16 07
Feb 14 07	None – broken water service on customer property. AWQI 70122			No BWA issued. Repaired & re-sampled.	Feb 20 07
Feb 20 07	None – AWQI 70199 – water service pulled from main.			BWA issued. Repaired & re-sampled.	Feb 23 07
Mar 06 07	None – broken water service on customer property. AWQI 70404			BWA issued. Repaired & re-sampled.	Mar 13 07
Mar 27 07	Lead – AWQI 70655	20.9 and 43.1	Ug/L	Re-sampled	Apr 04 07
Apr 18 07	None – AWQI 70936 – possible contamination of an existing isolated main			Flushed, Re-sampled	May 02 07
May 4 07	Free Chlorine – AWQI 71135	0.00	Mg/L	Flushed & re-sampled	May 04 07
May 4 07	Free chlorine – AWQI 71142	0.02	Mg/L	Flushed & re-sampled	May 04 07
May 7 07	None – AWQI 71169 – damaged service line			BWA issued, repaired and re-sampled.	May 14 07
May 8 07	None – AWQI 71191 – damaged service line			BWA issued, repaired, flushed & re-sampled.	May 14 07
May 12 07	None – AWQI 71284 – possible contamination during tie-in			BWA issued, flushed & re-sampled	May 18 07
May 25 07	Free chlorine – AWQI 71485	0.04	mg/L	Flushed & re-sampled	May 25 07
May 25 07	Free chlorine – AWQI 71492	0.04	mg/L	Flushed & re-sampled	May 25 07
May 29 07	None – AWQI 71549 - water service break			BWA issued, flushed & re-sampled.	Jun 04 07
May 29 07	None - AWQI 71551			BWA issued, flushed & re-sampled	Jun 01 07

Jun 04 07	Free chlorine – AWQI - 71675	0.01	Mg/L	Flushed & re-sampled	Jun 04 07
Jun 08 07	Free chlorine – AWQI – 71794	0.02	Mg/L	Flushed & re-sampled	Jun 08 07
Jun 19 07	None – AWQI 72018 – damaged water service line			BWA issued, repaired, flushed & re-sampled	Jun 22 07
Jul 16 07	None – AWQI 72685 – damaged 6” line			BWA issued, repaired, flushed & re-sampled	July 20 07
Jul 20 07	None – AWQI 72821 – damaged water service lines			BWA issued, repaired, flushed & re-sampled	July 26 07
Jul 23 07	None – AWQI 72866 – damaged water service lines			BWA issued, repaired, flushed & re-sampled	July 27 07
Jul 24 07	None – AWQI 72908 – damaged water service lines			BWA issued, repaired, flushed & re-sampled	July 30 07
Jul 25 07	None – AWQI 72924 – damaged water service lines			BWA issued, repaired, flushed & re-sampled	July 30 07
Jul 25 07	None – AWQI 72947 – damaged water service line			BWA issued, repaired, flushed & re-sampled	July 30 07
Jul 30 07	None – AWQI 73055 – damaged water service line			BWA issued, repaired, flushed & re-sampled	Aug 3 07
Aug 9 07	Free Chlorine – AWQI 73325	0.02 and 0.01	Ppm	Flushed & re-sampled	Aug 9 07
Aug 13 07	Free chlorine – AWQI 73393	0.01	Mg/L	Flushed & re-sampled	Aug 13 07
Aug 16 07	None – AWQI 73470 – damaged watermain			BWA issued, repaired, flushed & re-sampled	Aug 20 07
Aug 17 07	Free chlorine – AWQI 73492	0.01	Mg/L	Flushed & re-sampled	Aug 17 07
Aug 20 07	Free chlorine – AWQI 73521 (two addresses reported on one form)	0.04 and 0.00	Mg/L	Flushed & re-sampled	Aug 21 07
Aug 28 07	None – AWQI 74182 – damaged 2” service line			BWA issued, repaired, flushed & re-sampled	Sep 01 07
Sep 07 07	Free chlorine – AWQI 75132	0.00	Mg/L	Flushed & re-sampled	Sep 07 07
Sep 10 07	Free chlorine – AWQI 75224	0.02	Mg/L	Flushed & re-sampled	Sep 10 07
Sep 13 07	None – AWQI 75338 – broken main			BWA issued, repaired, flushed & re-sampled	Sep 20 07
Sep 15 07	Total coliform – AWQI 75418	TC = 3	/100 ml	BWA issued previously, flushed & re-sampled	Sep 21 07
Nov 20 07	None – AWQI 76781 – broken service pipe			BWA issued, flushed & re-sampled	Nov 23 07
Nov 27 07	None – AWQI 76854 – broken water line			BWA issued, repaired, flushed & re-sampled	Nov 27 07
Nov 27 07	None – AWQI 76865 – damaged water service line			BWA issued, repaired, flushed & re-sampled	Nov 28 07
Nov 29 07	None – AWQI 76885 – broken water pipe			BWA issued, repaired, flushed & re-sampled	Nov 29 07
Dec 14 07	None – AWQI 77082 – Broken water service			BWA issued, flushed & re-sampled	Dec 20 07

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	251	0 - >20,000	0 - >20,000	202	30 - >2,000
Treated	2538	0	0	1294	<1 - 200
Distribution	2063	0	0 - 4	1226	<1 - 360

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	0.011 – 0.795
Chlorine	8760	0.50 – 2.78
Fluoride (If the DWS provides fluoridation)	8760	0.52 – 0.74

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 issued	Parameter	Date Sampled	Result	Unit of Measure
5129-64CP7J	Bromate – Treated	Jan – Dec	1.4 – 6	ppb
5129-64CP7J	Bromate – Distribution	Jan – Dec	<1 – 7	ppb
5129-64CP7J	Suspended Solids (Composite)	Jan – Dec	2 - 40	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	03 Oct 07	0.00014	mg/L	
Arsenic	03 Oct 07	0.0006	mg/L	
Barium	03 Oct 07	0.0159	mg/L	
Boron	03 Oct 07	0.016	mg/L	
Cadmium	03 Oct 07	0.000004	mg/L	
Chromium	03 Oct 07	<0.0005	mg/L	
Lead (distribution)	03 Oct 07	<0.00002	mg/L	
Mercury	03 Oct 07	<0.00002	mg/L	
Selenium	03 Oct 07	<0.001	mg/L	
Sodium	10 Feb 06	12.1	mg/L	
Uranium	03 Oct 07	0.000133	mg/L	

Fluoride	December Average	0.66	mg/L	
Nitrite (as nitrogen)	03 Oct 07	0.205	mg/L	
Nitrate (as nitrogen)	03 Oct 07	<0.005	mg/L	

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	03 Oct 07	<0.00011	mg/L	
Aldicarb	03 Oct 07	<0.0003	mg/L	
Aldrin + Dieldrin	03 Oct 07	<0.000067	mg/L	
Atrazine + N-dealkylated metabolites	03 Oct 07	<0.00012	mg/L	
Azinphos-methyl	03 Oct 07	<0.00021	mg/L	
Bendiocarb	03 Oct 07	<0.00013	mg/L	
Benzene	03 Oct 07	<0.00037	mg/L	
Benzo(a)pyrene	03 Oct 07	<0.000004	mg/L	
Bromoxynil	03 Oct 07	<0.00033	mg/L	
Carbaryl	03 Oct 07	<0.00016	mg/L	
Carbofuran	03 Oct 07	<0.00037	mg/L	
Carbon Tetrachloride	03 Oct 07	<0.00041	mg/L	
Chlordane (Total)	03 Oct 07	<0.00011	mg/L	
Chlorpyrifos	03 Oct 07	<0.00018	mg/L	
Cyanazine	03 Oct 07	<0.00018	mg/L	
Diazinon	03 Oct 07	<0.000081	mg/L	
Dicamba	03 Oct 07	<0.0002	mg/L	
1,2-Dichlorobenzene	03 Oct 07	<0.0005	mg/L	
1,4-Dichlorobenzene	03 Oct 07	<0.00021	mg/L	
Dichlorodiphenyltrichloroethane (DDT) + metabolites	03 Oct 07	<0.00014	mg/L	
1,2-Dichloroethane	03 Oct 07	<0.00043	mg/L	
1,1-Dichloroethylene (vinylidene chloride)	03 Oct 07	<0.00041	mg/L	
Dichloromethane	03 Oct 07	<0.00034	mg/L	
2-4 Dichlorophenol	03 Oct 07	<0.00015	mg/L	
2,4-Dichlorophenoxy acetic acid (2,4-D)	03 Oct 07	<0.00019	mg/L	
Diclofop-methyl	03 Oct 07	<0.00040	mg/L	
Dimethoate	03 Oct 07	<0.00012	mg/L	
Dinoseb	03 Oct 07	<0.00036	mg/L	
Diquat	03 Oct 07	<0.001	mg/L	
Diuron	03 Oct 07	<0.000087	mg/L	
Glyphosate	03 Oct 07	<0.006	mg/L	
Heptachlor + Heptachlor Epoxide	03 Oct 07	<0.00011	mg/L	
Lindane (Total)	03 Oct 07	<0.000056	mg/L	
Malathion	03 Oct 07	<0.000091	mg/L	

Methoxychlor	03 Oct 07	<0.00014	mg/L	
Metolachlor	03 Oct 07	<0.000092	mg/L	
Metribuzin	03 Oct 07	<0.00012	mg/L	
Monochlorobenzene	03 Oct 07	<0.00058	mg/L	
Paraquat	03 Oct 07	<0.001	mg/L	
Parathion	03 Oct 07	<0.00018	mg/L	
Pentachlorophenol	03 Oct 07	<0.00015	mg/L	
Phorate	03 Oct 07	<0.00011	mg/L	
Picloram	03 Oct 07	<0.00025	mg/L	
Polychlorinated Biphenyls (PCB)	03 Oct 07	<0.00004	mg/L	
Prometryne	03 Oct 07	<0.00023	mg/L	
Simazine	03 Oct 07	<0.00015	mg/L	
THM (NOTE: show latest annual average) Q1 07 0.018 Q2 07 0.026 Q3 07 0.015 Q4 07 0.020	03 Oct 07	0.0197	mg/L	
Temephos	03 Oct 07	<0.00031	mg/L	
Terbufos	03 Oct 07	<0.00012	mg/L	
Tetrachloroethylene	03 Oct 07	<0.00045	mg/L	
2,3,4,6-Tetrachlorophenol	03 Oct 07	<0.00014	mg/L	
Triallate	03 Oct 07	<0.0001	mg/L	
Trichloroethylene	03 Oct 07	<0.00038	mg/L	
2,4,6-Trichlorophenol	03 Oct 07	<0.00025	mg/L	
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	03 Oct 07	<0.00022	mg/L	
Trifluralin	03 Oct 07	<0.00012	mg/L	
Vinyl Chloride	03 Oct 07	<0.00017	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
Benzo(a)pyrene	<0.00001	mg/L	Jan 10 2007
Benzo(a)pyrene	<0.00001	mg/L	Apr 25 2007
Benzo(a)pyrene	<0.00001	mg/L	July 09 2007
Benzo(a)pyrene	<0.00001	mg/L	Oct 03 2007
Aldicarb	<0.009	mg/L	Jan 10 2007
Aldicarb	<0.009	mg/L	Apr 25 2007
Bromate (Treated)	6	ppb	Dec 12 2007
Bromate (Distribution)	6	ppb	Dec 12 2006
Bromate (Distribution)	7	ppb	Dec 12 2007

(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.)