

**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 2003

<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 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, Ontario, 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 <input type="checkbox"/> No <input type="checkbox"/></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 <input type="checkbox"/> No <input type="checkbox"/></p>
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List Drinking-Water Systems, which receive all of their drinking water from your system:

Town of LaSalle, Ontario

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

Describe your Drinking-Water System

Surface water source (Detroit River)

Conventional treatment program including Screening, pH adjustment, Primary Disinfection including taste and odour control (Ozone), Coagulation, Flocculation, Sedimentation, Filtration, Chlorination and Fluoridation.

Sedimentation sludge and backwash water treatment through coagulation, flocculation and sedimentation followed by sludge dewatering and disposal.

List all water treatment chemicals used over this reporting period

Ozone, Aluminum Sulphate (Alum), Carbon Dioxide (CO₂), Chlorine, Fluoride, Cationic Polymer Magnafloc LT-22, Calcium Thiosulphate,

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

Describe

Upgrade of Older Treatment Plant to Ozone disinfection, including construction of Ozone stainless steel baffled contactors, pH adjustment, new coagulant feed (alum and polymer) systems and SCADA system upgrades.

Improved baffling in Old plant clearwells to improve T10/T and contact time for disinfection.

Installation of Raw Water Flow meter in Old Treatment Plant raw water supply

Upgrade to plant instrumentation including continuous fluoride monitors

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 17	Lead – customers plumbing	103	ppb	Internal plumbing problem, flushing program recommended	Jan 17
Feb 24	Lead – customers plumbing	18	ppb	Internal plumbing problem, flushing program recommended	Feb 24

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Feb 25	Lead – customers plumbing	11	ppb	Internal plumbing problem, flushing program recommended	Feb 25
Apr 3	Bacteria background	>200	CFU/100 mls	Initiate resample protocol	April 3
Apr 4	Total Coliform –	1	CFU./100 mls	Initiate resample protocol	Apr 4
Apr 15	chlorine	.02	Mg/L	Flush and resample, no bacteria found	Apr 15
Apr 30	HPC – customers plumbing	>2000	CFU/ml	Initiate resample protocol	April 30
May 8	Bacteria background – customers plumbing	>200	CFU/100 ml	Initiate resample protocol	May 8
Jun 18	Operational issue – customers plumbing			Category 3 water main break	Jun 18
Jun 23	turbidity		NTU	Not adverse, courtesy notification only	Jun 23
July 17	chlorine	.02	Mg/l	Flush and resample, no bacteria found	July 17
July 27	chlorine	.03	Mg/l	Flush and resample, no bacteria found	July 27
Aug 7	chlorine	.01	Mg/l	Flush and resample, no bacteria found	Aug 7
Aug 18	chlorine	.00	Mg/l	Flush and resample, no bacteria found	Aug 18
Sept 3	chlorine	.02	Mg/l	Flush and resample, no bacteria found	Sept 3
Sept 26	chlorine	.00	Mg/l	Flush and resample, no bacteria found	Sept 26
Oct 3	chlorine	.00	Mg/l	Flush and resample, no bacteria found	Oct 3
Oct 4	fecal	1	CFU/100 ml	Initiate resample protocol	Oct 4
Nov 4	chlorine	.03	Mg/l	Flush and resample, no bacteria found	Nov 4
Nov 17	chlorine	.04	Mg/l	Operational Flush and resample, no bacteria found	Nov 17
Nov 17	chlorine	.04	Mg/l	Operational Flush and resample, no bacteria found	Nov 17
Nov 24	chlorine	.00	Mg/l	Flush and resample, no bacteria found	Nov 24
Nov 27	chlorine	.04	Mg/l	Operational Flush and resample, no bacteria found	Nov 27

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Nov 28	chlorine	.02	Mg/l	Flush and resample, no bacteria found	Nov 28
Dec 01	chlorine	.02	Mg/l	Flush and resample, no bacteria found	Dec 01
Dec 04	chlorine	.02	Mg/l	Operational Flush and resample, no bacteria found	Dec 04
Dec 04	chlorine	.02	Mg/l	Operational Flush and resample, no bacteria found	Dec 04
Dec 04	chlorine	.02	Mg/l	Operational Flush and resample, no bacteria found	Dec 04
Dec 15	chlorine	.03	Mg/l	Flush and resample, no bacteria found	Dec 15
Dec 15	chlorine	.04	Mg/l	Flush and resample, no bacteria found	Dec 15
Dec 18	chlorine	.04	Mg/l	Operational Flush and resample, no bacteria found	Dec 18

Mi.crobiological 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	345	2 to 284	10 to >2000	238	10 to 5700
Treated	305	<1 to <1	<1 to <1	248	<1 to 9
Distribution	2047	<1 to 1	<1 to 1	1007	<1 to 55

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	8760	0.01 to 0.09
Chlorine	8760	1.09 to 1.29
Fluoride (If the DWS provides fluoridation)	8760	0.52 to 0.69

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

NOTE: Record the unit of measure if it is **not** milligrams per litre.

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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
5986-5P5QQD	Bromates – treated water	Jan 23 to Dec 29 Monthly	<1.6 to 5.4	Micrograms per liter
5986-5P5QQD	Bromates - Distribution	Jan 23 to Dec 29 Monthly	<1 to 6.4	Micrograms per liter
5986-5P5QQD	Suspended solids - residue	Jan to Dec - monthly	9.6 to 22.9	Milligrams per liter

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Dec. 2003	<0.005	Micrograms per liter	
Arsenic	Dec. 2003	<1	Micrograms per liter	
Barium	Dec. 2003	20	Micrograms per liter	
Boron	Dec. 2003	<50	Micrograms per liter	
Cadmium	Dec. 2003	<0.1	Micrograms per liter	
Chromium	Dec. 2003	<1	Micrograms per liter	
Lead	Dec. 2003	<1 treated 1 distribution	Micrograms per liter	
Mercury	Dec. 2003	<0.1	Micrograms per liter	
Selenium	Dec. 2003	<5	Micrograms per liter	
Uranium	Dec. 2003	<5	Micrograms per liter	
Fluoride	Oct/Nov/Dec. 2003 average	0.63	Miligrams per liter	
Nitrite	Dec. 2003	<0.01	Miligrams per liter	
Nitrate	Dec. 2003	0.043	Miligrams per liter	

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Dec. 2003	<0.1	Micrograms per liter	
Aldicarb	Dec. 2003	9	Micrograms per liter	
Aldrin + Dieldrin	Dec. 2003	<0.04	Micrograms per liter	
Atrazine + N-dealkylated metabolites	Dec. 2003	<0.1	Micrograms per liter	
Azinphos-methyl	Dec. 2003	<0.1	Micrograms per liter	
Bendiocarb	Dec. 2003	<0.2	Micrograms per liter	
Benzene	Dec. 2003	<0.5	Micrograms per liter	
Benzo(a)pyrene	Dec. 2003	<0.01	Micrograms per liter	
Bromoxynil	Dec. 2003	<0.2	Micrograms per liter	
Carbaryl	Dec. 2003	<0.2	Micrograms per liter	
Carbofuran	Dec. 2003	<0.2	Micrograms per liter	
Carbon Tetrachloride	Dec. 2003	<0.5	Micrograms per liter	
Chlordane (Total)	Dec. 2003	<0.3	Micrograms per liter	
Chlorpyrifos	Dec. 2003	<0.1	Micrograms per liter	
Cyanazine	Dec. 2003	<0.1	Micrograms per liter	
Diazinon	Dec. 2003	<0.1	Micrograms per liter	
Dicamba	Dec. 2003	<0.2	Micrograms per liter	
1,2-Dichlorobenzene	Dec. 2003	<0.5	Micrograms per liter	
1,4-Dichlorobenzene	Dec. 2003	<0.5	Micrograms per liter	
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Dec. 2003	<0.1	Micrograms per liter	
1,2-Dichloroethane	Dec. 2003	<0.5	Micrograms per liter	
1,1-Dichloroethylene (vinylidene chloride)	Dec. 2003	<0.5	Micrograms per liter	
Dichloromethane	Dec. 2003	<0.5	Micrograms per liter	
2-4 Dichlorophenol	Dec. 2003	<0.5	Micrograms per liter	
2,4-Dichlorophenoxy acetic acid (2,4-D)	Dec. 2003	<0.2	Micrograms per liter	
Diclofop-methyl	Dec. 2003	<0.1	Micrograms per liter	
Dimethoate	Dec. 2003	<0.1	Micrograms per liter	
Dinoseb	Dec. 2003	<0.2	Micrograms per liter	

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Diquat	Dec. 2003	<7	Micrograms per liter	
Diuron	Dec. 2003	<10	Micrograms per liter	
Glyphosate	Dec. 2003	<10	Micrograms per liter	
Heptachlor + Heptachlor Epoxide	Dec. 2003	<0.1	Micrograms per liter	
Linadane (Total)	Dec. 2003	<0.1	Micrograms per liter	
Malathion	Dec. 2003	<0.1	Micrograms per liter	
Methoxychlor	Dec. 2003	<0.1	Micrograms per liter	
Metolachlor	Dec. 2003	<0.1	Micrograms per liter	
Metribuzin	Dec. 2003	<0.1	Micrograms per liter	
Monochlorobenzene	Dec. 2003	<0.5	Micrograms per liter	
Paraquat	Dec. 2003	<1	Micrograms per liter	
Parathion	Dec. 2003	<0.1	Micrograms per liter	
Pentachlorophenol	Dec. 2003	<0.5	Micrograms per liter	
Phorate	Dec. 2003	<0.1	Micrograms per liter	
Picloram	Dec. 2003	<0.2	Micrograms per liter	
Polychlorinated Biphenyls(PCB)	Dec. 2003	<0.06	Micrograms per liter	
Prometryne	Dec. 2003	<0.1	Micrograms per liter	
Simazine	Dec. 2003	<0.1	Micrograms per liter	
THM (treated) THM (distribution) (NOTE: show latest quarterly average)	Dec. 2003 Dec. 2003 Avg (Last 4)	<2 8.2 8.8	Micrograms per liter	
Temephos	Dec. 2003	<0.1	Micrograms per liter	
Terbufos	Dec. 2003	<0.2	Micrograms per liter	
Tetrachloroethylene	Dec. 2003	<0.5	Micrograms per liter	
2,3,4,6-Tetrachlorophenol	Dec. 2003	<0.5	Micrograms per liter	
Triallate	Dec. 2003	<0.1	Micrograms per liter	
Trichloroethylene	Dec. 2003	<0.5	Micrograms per liter	
2,4,6-Trichlorophenol	Dec. 2003	<0.5	Micrograms per liter	
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Dec. 2003	<0.2	Micrograms per liter	

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Trifluralin	Dec. 2003	<0.1	Micrograms per liter	
Vinyl Chloride	Dec. 2003	<0.5	Micrograms per liter	

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
Bromate (Distribution)	5.1 - 6.9	ppb	Jan 23, 2003
Bromate (Treated, distribution)	5.4, 5.5	ppb	Feb 20, 2003
Bromate Distribution	5.8 - 6.4	ppb	April 23, 2003

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