



**OPTIONAL ANNUAL REPORT TEMPLATE**

<b>Drinking-Water System Number:</b>	220002949
<b>Drinking-Water System Name:</b>	West Elgin Water Treatment Plant
<b>Drinking-Water System Owner:</b>	The Corporation of the Municipality of West Elgin
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 1, 2008 to December 31, 2008

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [ X ]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ ] No [X]</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;"> <p>Ontario Clean Water Agency 9210 Graham Road, RR#2 West Lorne, ON N0L 2P0</p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served:  <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></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; width: 100px; height: 20px; margin: 5px 0;"></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:

Drinking Water System Name	Drinking Water System Number
Southwest Middlesex Distribution System	260005502

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

#### West Elgin Water Treatment Plant

The West Elgin Water Treatment plant receives raw water from Lake Erie via a 700mm diameter primary intake pipe. The intake pipe is equipped with a chlorine solution line for zebra muscle control. There is a 600mm stand-by intake pipe along the shoreline, but does not have zebra muscle control capabilities. The raw water is conveyed to the low lift pumping station via an inlet valve chamber by four fixed speed vertical turbine pumps. Large debris is filtered by two 10mm wire mesh stainless steel screens. A flow meter is installed on the discharge header of a 350mm diameter raw water transmission main to the water treatment plant.

The water is injected with the coagulant prior to being discharged into the two parallel in-ground flocculation tanks in series, with a total volume of 300m<sup>3</sup>. The water is then directed into two parallel sloped sedimentation basins, with a total volume of 1,460m<sup>3</sup>. The clarified water is then discharged into two of three multi-media gravity filters. The third filter is on stand-by. The filters are backwashed by a centrifugal backwash pump. The filtered water is directed into the clearwell (capacity 250m<sup>3</sup>) where it is injected with chlorine gas for disinfection. The water is then directed through the UV disinfection system, consisting of two reactors with a control panel.

Process wastewater is directed to a reinforced concrete basin with effective storage capacity of approximately 300m<sup>3</sup> for temporary storage of waste until the supernatant is discharged to Lake Erie.

The maximum capacity of the water treatment plant is 6,829m<sup>3</sup> due to limited filtration capabilities. The plant services the communities of Eagle, New Glasgow, Rodney, West Lorne, Dutton-Dunwich, Southwest Middlesex, Bothwell and Newbury.

Water storage consists of the West Lorne Standpipe, with a volume of 2889m<sup>3</sup>.

#### Iona Re-chlorination Station

The Iona Re-chlorination Facility is composed of two chlorine analyzers measuring the incoming supply and the other measuring the outgoing supply. The system re-chlorinates via chemical meter pump using sodium hypochlorite solution.



**List all water treatment chemicals used over this reporting period**

Chlorine Gas  
Sodium Hypochlorite  
Polyaluminum Chloride

**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**

**West Elgin Water Treatment Plant**  
UV Bulb replacement and maintenance \$5000  
High lift pump soft start replaced \$4000  
Pre-chlorination injector assembly \$7500

**Iona Re-chlorination Facility**  
Free chlorine probe replaced \$2500  
pH probe replaced \$200

**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

**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 #)
<b>Raw</b>	53	0 – 320	0 - 5000	n/a	n/a
<b>Treated</b>	53	0 - 0	0 – 0	53	0 - 150
<b>Distribution</b>	212	0 – 0	0 – 0	53	0 - 1800

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



	<b>Number of Grab Samples</b>	<b>Range of Results (min #)-(max #)</b>
<b>Turbidity (Treated)</b>	8760	0.014 – 0.384 NTU
<b>Chlorine (Treated)</b>	8760	1.18 – 2.68

*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.**

<b>Date of legal instrument issued</b>	<b>Parameter</b>	<b>Date Sampled</b>	<b>Result</b>	<b>Unit of Measure</b>

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

<b>Parameter</b>	<b>Sample Date</b>	<b>Result Value</b>	<b>Unit of Measure</b>	<b>Exceedance</b>
<b>Antimony</b>	January 28, 2008	0.15	µg/L	no
<b>Arsenic</b>	January 28, 2008	0.3	µg/L	no
<b>Barium</b>	January 28, 2008	20.2	µg/L	no
<b>Boron</b>	January 28, 2008	23.0	µg/L	no
<b>Cadmium</b>	January 28, 2008	0.008	µg/L	no
<b>Chromium</b>	January 28, 2008	<0.5	µg/L	no
<b>*Lead</b>	January 28, 2008	0.16	µg/L	no
<b>Mercury</b>	January 28, 2008	<0.02	µg/L	no
<b>Selenium</b>	January 28, 2008	<1.0	µg/L	no
<b>Sodium</b>	January 28, 2008	9.45	mg/L	no
<b>Uranium</b>	January 28, 2008	0.035	µg/L	no
<b>Fluoride</b>	January 28, 2008	0.08	mg/L	no
<b>Nitrite</b>	January 28, 2008 April 28, 2008 July 14, 2008 October 14, 2008	<0.005 <0.005 <0.005 <0.005	mg/L	no
<b>Nitrate</b>	January 28, 2008 April 28, 2008 July 14, 2008 October 14, 2008	0.205 0.274 0.186 0.136	mg/L	no

\*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 Lead Results (min#) – (max #)	Number of Exceedances
Plumbing	98	0.02 – 21.3	4
Distribution	18	0.02 – 0.51	0

**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	01/28/08	<0.11	µg/L	no
Aldicarb	01/28/08	<0.3	µg/L	no
Aldrin + Dieldrin	01/28/08	<0.067	µg/L	no
Atrazine + N-dealkylated metabolites	01/28/08	<0.12	µg/L	no
Azinphos-methyl	01/28/08	<0.21	µg/L	no
Bendiocarb	01/28/08	<0.13	µg/L	no
Benzene	01/28/08	<0.37	µg/L	no
Benzo(a)pyrene	01/28/08	<0.004	µg/L	no
Bromoxynil	01/28/08	<0.33	µg/L	no
Carbaryl	01/28/08	<0.16	µg/L	no
Carbofuran	01/28/08	<0.37	µg/L	no
Carbon Tetrachloride	01/28/08	<0.41	µg/L	no
Chlordane (Total)	01/28/08	<0.11	µg/L	no
Chlorpyrifos	01/28/08	<0.18	µg/L	no
Cyanazine	01/28/08	<0.18	µg/L	no
Diazinon	01/28/08	<0.081	µg/L	no
Dicamba	01/28/08	<0.2	µg/L	no
1,2-Dichlorobenzene	01/28/08	<0.5	µg/L	no
1,4-Dichlorobenzene	01/28/08	<0.14	µg/L	no
Dichlorodiphenyltrichloroethane (DDT) + metabolites	01/28/08	<0.14	µg/L	no
1,2-Dichloroethane	01/28/08	<0.43	µg/L	no
1,1-Dichloroethylene (vinylidene chloride)	01/28/08	<0.41	µg/L	no
Dichloromethane	01/28/08	<0.34	µg/L	no
2-4 Dichlorophenol	01/28/08	<0.15	µg/L	no
2,4-Dichlorophenoxy acetic acid (2,4-D)	01/28/08	<0.19	µg/L	no
Diclofop-methyl	01/28/08	<0.4	µg/L	no
Dimethoate	01/28/08	<0.12	µg/L	no
Dinoseb	01/28/08	<0.36	µg/L	no
Diquat	01/28/08	<1.0	µg/L	no



Diuron	01/28/08	<0.087	µg/L	no
Glyphosate	01/28/08	<6.0	µg/L	no
Heptachlor + Heptachlor Epoxide	01/28/08	<0.11	µg/L	no
Lindane (Total)	01/28/08	<0.056	µg/L	no
Malathion	01/28/08	<0.091	µg/L	no
Methoxychlor	01/28/08	<0.14	µg/L	no
Metolachlor	01/28/08	<0.092	µg/L	no
Metribuzin	01/28/08	<0.12	µg/L	no
Monochlorobenzene	01/28/08	<0.58	µg/L	no
Paraquat	01/28/08	<1.0	µg/L	no
Parathion	01/28/08	<0.18	µg/L	no
Pentachlorophenol	01/28/08	<0.15	µg/L	no
Phorate	01/28/08	<0.11	µg/L	no
Picloram	01/28/08	<0.25	µg/L	no
Polychlorinated Biphenyls(PCB)	01/28/08	<0.04	µg/L	no
Prometryne	01/28/08	<0.23	µg/L	no
Simazine	01/28/08	<0.15	µg/L	no
THM (NOTE: show latest annual average)	01/28/08	18 42 26 29 Avg: 29	µg/L	no
Temephos	01/28/08	<0.31	µg/L	no
Terbufos	01/28/08	<0.12	µg/L	no
Tetrachloroethylene	01/28/08	<0.45	µg/L	no
2,3,4,6-Tetrachlorophenol	01/28/08	<0.14	µg/L	no
Triallate	01/28/08	<0.1	µg/L	no
Trichloroethylene	01/28/08	<0.38	µg/L	no
2,4,6-Trichlorophenol	01/28/08	<0.25	µg/L	no
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	01/28/08	<0.22	µg/L	no
Trifluralin	01/28/08	<0.12	µg/L	no
Vinyl Chloride	01/28/08	<0.17	µg/L	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