

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

Drinking-Water System Number:	220003341
Drinking-Water System Name:	Wallaceburg Water Treatment Plant
Drinking-Water System Owner:	Municipality of Chatham-Kent
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1 – 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 [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;"> Chatham-Kent P.U.C. Office 325 Grand Ave., East P.O. Box 1191 Chatham, Ontario N7M 5L8 </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">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: 5px; width: fit-content; margin: 5px auto;">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>
---	---

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
N/A	

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

Raw Water is drawn from the Chenal Ecarte, which is fed by the St. Clair River. The Ministry of Environment monitors the St. Clair River for various contaminants. In the event that the Wallaceburg WTP is alerted to a spill that has occurred upstream, the raw water intake is shut down and monitoring of the raw water occurs until all traces of the chemical has passed by the raw water intake.

Items that are pulled into the intake pipe are screened out while the raw water continues to the filtration plant for treatment. Chlorine is injected into the raw water intake during the summer months to control the growth of zebra mussels. In the summer months a chemical called Clarion A-7 is also added to the raw water before it flows into the sedimentation tanks. In the winter months, a chemical called Poly Aluminum Chloride (PAC) is used in place of the Clarion A-7 due to the fact that PAC works better in colder water temperatures. The addition of the Clarion A-7 or PAC along with mixing, causes the light suspended particles to join together and form larger heavy particles (floc) that will settle out of the water. The water plant also utilizes a coagulant aid in elevated turbidity water processing called Magnafloc LT27AG Polymer. This polymer works with the Clarion A-7 or the PAC in coagulation process. Once the water leaves the pretreatment tanks, it is chlorinated. The water moves on top of the filters and is moved through the different layers of material that make up the filter. The filters in the Wallaceburg plant are made up of a layer of anthracite, sand and gravel. The filtration process traps any floc and particles of dirt that did not settle out in the previous process. The filtered water is then stored in reservoirs until it is needed to supply the distribution system with water. As the treated water leaves the filtration plant chlorine is added to keep the water from developing bacteria as it travels to the customer. Fluoride is also added to the treated water to help prevent tooth decay. The treated water in the distribution system supplies the Wallaceburg area and the elevated water tower located on the north end of Wallaceburg. The elevated water tower has a holding capacity of 4.5 million litres of water.

List all water treatment chemicals used over this reporting period

Clarion A-7, Poly Aluminum Chloride, Magnafloc LT27AG polymer, Chlorine Gas, Sodium Hypochlorite, Hydrofluosilicic Acid

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

Paint repairs to interior of bowl at water tower \$26,000
SCADA workstation \$20,000
Vent / Vacuum relief equipment upgrade at water tower \$15,500
Reconditioning of filter backwash troughs \$6,000
Spare chemical metering pump \$4,500
SCADA spare parts \$4,000
Raw water characterization study \$4,000
Pressure Transmitter replacement \$2,200
Repairs to storm collection system \$2,000
Chemical transfer pump \$2,000

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
Feb. 17/07	Possible watermain contamination during a repair.	Precautionary Boil Water Advisory Issued		Resampled 2 sets of Bacteriological tests with no Bacteria present	Feb. 21/07
April 30/07	Possible watermain contamination during a repair.	Precautionary Boil Water Advisory Issued		Resampled 2 sets of Bacteriological tests with no Bacteria present	May 2/07
May 7/07	Possible watermain contamination during a repair.	Precautionary Boil Water Advisory Issued		Resampled 2 sets of Bacteriological tests with no Bacteria present	May 9/07

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

Sept. 25/07	Post Chlorine Residual	Post Chlorine Residual reached 4.00 mg/L	SCADA programming changes	Sept. 25/07
Sept. 27/07	Possible watermain contamination during a repair.	Precautionary Boil Water Advisory Issued	Resampled 2 sets of Bacteriological tests with no Bacteria present	Sept. 27/07
Oct. 9/07	Possible watermain contamination during a repair.	Precautionary Boil Water Advisory Issued	Resampled 2 sets of Bacteriological tests with no Bacteria present	Oct. 11/07
Oct. 24/07	Possible watermain contamination during a repair.	Precautionary Boil Water Advisory Issued	Resampled 2 sets of Bacteriological tests with no Bacteria present	Oct. 26/07

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 or Background Colony Counts	Range of HPC Results or Background Colony Counts (min #)-(max #)
Raw	52	0 - 760	0 - >2001	52	N/A
Treated	52	0 - 0	0 - 0	52	9 - 10
Distribution	364	0 - 0	0 - 0	364	9 - 410

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	0.016 - 1.007 NTU
Chlorine	8760	0.533 - 1.946 mg/L
Fluoride (If the DWS provides fluoridation)	8760	0.100 - 1.386 mg/L

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
N/A				
N/A				

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

Parameter	Sample Date Jan. 11/07	Sample Date Apr. 12/07	Sample Date July 10/07	Sample Date Oct. 05/07
Antimony – ug/L	<1	<1	<0.5	<0.5
Arsenic – ug/L	<1	<1	<1	<1
Barium – ug/L	23	14	14	15
Boron – ug/L	23	16	<10	13
Cadmium – ug/L	<0.1	<0.1	<0.1	<0.1
Chromium – ug/L	<5	<5	<5	<5
Lead – ug/L	<0.5	N/A	N/A	N/A
Lead Dist. System ug/L	0.6	N/A	NA	N/A
Mercury – ug/L	<0.0001	<0.0001	<0.0001	<0.0001
Selenium – ug/L	<2	<2	<2	<2
Sodium – ug/L	6800	N/A	N/A	N/A
Sodium Dist. System ug/L	5600	N/A	N/A	N/A
Uranium – ug/L	<0.1	<0.1	<0.1	<0.1
Fluoride – mg/L	0.40	N/A	N/A	N/A
Nitrite – mg/L	<0.01	<0.01	<0.01	<0.01
Nitrate – mg/L	2.6	0.3	0.3	0.2

Summary of Organic parameters sampled during this reporting period or the most recent sample results. (Results measured in ug/L)

Parameter	Sample Date Jan. 11/07	Sample Date Apr. 12/07	Sample Date July 10/07	Sample Date Oct. 05/07
Alachlor	<0.5	<0.5	<0.5	<0.5
Aldicarb	<5.0	<5.0	<5.0	<5.0
Aldrin + Dieldrin	<0.012	<0.012	<0.012	<0.012
Atrazine + N-dealkylated metabolites	<1.0	<1.0	<1.0	<1.0
Azinphos-methyl	<2.0	<2.0	<2.0	<2.0
Bendiocarb	<2.0	<2.0	<2.0	<2.0
Benzene	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene	<0.0090	<0.0090	<0.0090	<0.0090
Bromoxynil	<0.5	<0.5	<0.5	<0.5
Carbaryl	<5.0	<5.0	<5.0	<5.0
Carbofuran	<5.0	<5.0	<5.0	<5.0
Carbon Tetrachloride	<0.1	<0.1	<0.1	<0.1
Chlordane (Total)	<0.012	<0.012	<0.012	<0.012
Chlorpyrifos	<1.0	<1.0	<1.0	<1.0
Cyanazine	<1.0	<1.0	<1.0	<1.0
Diazinon	<1.0	<1.0	<1.0	<1.0
Dicamba	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	<0.2	<0.2	<0.2	<0.2
1,4-Dichlorobenzene	<0.2	<0.2	<0.2	<0.2
Dichlorodiphenyltrichloroethane (DDT) + metabolites	<0.024	<0.024	<0.024	<0.024
1,2-Dichloroethane	<0.1	<0.1	<0.1	<0.1
1,1-Dichloroethylene (vinylidene chloride)	<0.1	<0.1	<0.1	<0.1
Dichloromethane	<0.5	<0.5	<0.5	<0.5
2-4 Dichlorophenol	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenoxy acetic acid (2,4-D)	<1.0	<1.0	<1.0	<1.0
Diclofop-methyl	<0.90	<0.90	<0.90	<0.90
Dimethoate	<2.5	<2.5	<2.5	<2.5
Dinoseb	<1.0	<1.0	<1.0	<1.0
Diquat	<7.0	<7.0	<7.0	<7.0
Diuron	<10	<10	<10	<10
Glyphosate	<10	<10	<10	<10
Heptachlor + Heptachlor Epoxide	<0.012	<0.012	<0.012	<0.012
Lindane (Total)	<0.006	<0.006	<0.006	<0.006
Malathion	<5.0	<5.0	<5.0	<5.0
Methoxychlor	<0.024	<0.024	<0.024	<0.024
Metolachlor	<0.050	<0.050	<0.050	<0.50
Metribuzin	<5.0	<5.0	<5.0	<5.0
Monochlorobenzene	<0.1	<0.1	<0.1	<0.1

Paraquat	<1.0	<1.0	<1.0	<1.0
Parathion	<1.0	<1.0	<1.0	<1.0
Pentachlorophenol	<0.50	<0.50	<0.50	<0.50
Phorate	<0.50	<0.50	<0.50	<0.50
Picloram	<5.0	<5.0	<5.0	<5.0
Polychlorinated Biphenyls(PCB)	<0.05	<0.05	<0.05	<0.05
Prometryne	<0.25	<0.25	<0.25	<0.25
Simazine	<1.0	<1.0	<1.0	<1.0
THM Treated Jan., Apr., July, Oct. THM Annual Average	34.5	9.6	21.2	16.2 20.4
THM Distribution System Jan., Apr., July, Oct. THM Annual Average	46.5	24.7	41.9	74.4 46.9
Temephos	<10	<10	<10	<10
Terbufos	<0.70	<0.70	<0.70	<0.70
Tetrachloroethylene	<0.1	<0.1	<0.1	<0.1
2,3,4,6-Tetrachlorophenol	<0.50	<0.50	<0.50	<0.50
Triallate	<1.0	<1.0	<1.0	<1.0
Trichloroethylene	<0.1	<0.1	<0.1	<0.1
2,4,6-Trichlorophenol	<0.50	<0.50	<0.50	<0.50
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	<1.0	<1.0	<1.0	<1.0
Trifluralin	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	<0.2	<0.2	<0.2	<0.2

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
THM 100 ug/L	74.4	ug/L	Oct. 05/07
Nitrate 10 mg/L	6.2	mg/L	Dec. 27/07

(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)

Summary of additional voluntary testing and sampling on treated water.

Sample Date	Parameter		Nitrite + Nitrate	Unit of Measure
	Nitrite	Nitrate		
Jan. 02/07	<0.01	0.4	0.4	mg/L
Jan. 08/07	<0.01	2.2	2.2	mg/L
Jan. 15/07	<0.01	0.4	0.4	mg/L
Jan. 22/07	<0.01	0.4	0.4	mg/L
Jan. 29/07	<0.01	0.3	0.3	mg/L
Feb. 05/07	<0.01	0.4	0.4	mg/L
Feb. 12/07	<0.01	0.4	0.4	mg/L
Feb. 19/07	<0.01	0.3	0.3	mg/L
Feb. 26/07	<0.01	0.3	0.3	mg/L
March 05/07	<0.01	0.6	0.6	mg/L
March 12/07	<0.01	0.5	0.5	mg/L
March 19/07	<0.01	3.0	3.0	mg/L
March 26/07	<0.01	0.7	0.7	mg/L
April 02/07	<0.01	0.4	0.4	mg/L
April 10/07	<0.01	0.3	0.3	mg/L
April 16/07	<0.01	0.3	0.3	mg/L
April 23/07	<0.01	0.3	0.3	mg/L
April 29/07	<0.01	0.7	0.7	mg/L
May 05/07	<0.01	0.3	0.3	mg/L
May 14/07	<0.01	0.4	0.4	mg/L
May 22/07	<0.01	0.3	0.3	mg/L
May 28/07	<0.01	0.4	0.4	mg/L
June 04/07	<0.01	0.4	0.4	mg/L
June 06/11	<0.01	0.4	0.4	mg/L
June 18/07	<0.01	0.3	0.3	mg/L
June 25/07	<0.01	0.3	0.3	mg/L
July 03/07	<0.01	0.3	0.3	mg/L
July 09/07	<0.01	0.3	0.3	mg/L
July 16/07	<0.01	0.3	0.3	mg/L
July 23/07	<0.01	0.3	0.3	mg/L
July 30/07	<0.01	0.3	0.3	mg/L
Aug. 08/07	<0.01	0.2	0.2	mg/L
Aug. 13/07	<0.01	0.3	0.3	mg/L
Aug. 20/07	<0.01	0.3	0.3	mg/L
Aug. 30/07	<0.01	0.3	0.3	mg/L

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

Sept. 04/07	<0.01	0.2	0.2	mg/L
Sept. 10/07	<0.01	0.2	0.2	mg/L
Sept. 17/07	<0.01	0.2	0.2	mg/L
Sept. 24/07	<0.01	0.2	0.2	mg/L
Oct. 01/07	<0.01	0.2	0.2	mg/L
Oct. 09/07	<0.01	0.2	0.2	mg/L
Oct. 15/07	<0.01	0.2	0.2	mg/L
Oct. 22/07	<0.01	0.2	0.2	mg/L
Oct. 29/07	<0.01	0.3	0.3	mg/L
Nov. 05/07	<0.01	0.2	0.2	mg/L
Nov. 13/07	<0.01	0.2	0.2	mg/L
Nov. 19/07	<0.01	0.2	0.2	mg/L
Nov. 26/07	<0.01	0.3	0.3	mg/L
Dec. 03/07	<0.01	0.2	0.2	mg/L
Dec. 10/07	<0.01	0.2	0.2	mg/L
Dec. 17/07	<0.01	0.3	0.3	mg/L
Dec. 27/07	<0.01	6.2	6.2	mg/L