



OPTIONAL ANNUAL REPORT TEMPLATE

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|--|-------------------------------|
| Drinking-Water System Number: | 220003378 |
| Drinking-Water System Name: | Chatham Water System |
| Drinking-Water System Owner: | Municipality of Chatham-Kent |
| Drinking-Water System Category: | Large Municipal |
| Period being reported: | January 1 – December 31, 2009 |

| | |
|---|---|
| <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 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>Chatham-Kent P.U.C. 325 Grand Ave. East P.O. Box 1191 Chatham, ON N7M 5L8</p> </div> | <p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input type="text" value="N/A"/></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 type="text" value="N/A"/></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> |
|---|---|

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

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 Chatham Water Treatment Plant receives its raw water from the Kent County Raw Pumping Station. It utilizes the same raw water pumping station as the South-Kent WTP. The Raw Pumping Station supplies the water from Lake Erie to the stand pipe in Cedar Springs, and then flows to Chatham.

The process after upgrades includes: intake, screening, low lift pumping (raw water) surge tower, Actiflo micro-sand ballasted clarifiers (coagulation, injection of micro- sand and clarification), low lift pumping (settled water pumping), and filtration, treated water storage and high lift pumping. The distribution system includes 6 elevated tanks (Chatham, Paincourt, Mitchell’s Bay, Eberts, Dresden and Thamesville). Fluoride is also added to the water to prevent tooth decay.

Residue management process includes: equalization, flocculation, clarification, thickening and dewatering. The supernant from the clarifiers is discharged into the Thames River after de-chlorination.

List all water treatment chemicals used over this reporting period

Gas Chlorine, Fluoride, Poly-Aluminum Chloride and Sodium-metasulphate.

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

In the year 2009, the Chatham WTP had the following maintenance expenses:

1. Chlorinator Upgrade -\$14,000
2. 2 ROTORK Actuators - \$20,000

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 |
|---------------|--------------------------------|---------------------|-----------------|-------------------------------------|------------------------|
| June 24/09 | Distribution System Main Break | Boil Water Advisory | | 2 Consecutive samples, results zero | June 26/09 |
| Nov 25/09 | CFUs | 5 Total Coliforms | | 2 Consecutive samples, results zero | Nov 27/09 |



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 | 52 | 0-10 | 0-360 | 0 | 0 |
| Treated | 52 | 0 | 0 | 50 | 0-40 |
| Distribution | 1612 | 0 | 0-5 | 1144 | 0-1400 |

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 | 0.02 – 1.00 |
| Chlorine | 8760 | 1.20 – 2.50 |
| Fluoride (If the DWS provides fluoridation) | 8760 | 0.52 – 0.99 |

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 |
|---------------------------------|-----------|--------------|--------|-----------------|
| Appended | | | | |
| | | | | |

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 | Aug 20/09 | n/d | mg/L | No |
| Arsenic | Aug 20/09 | n/d | mg/L | No |
| Barium | Aug 20/09 | 21 | mg/L | No |
| Boron | Aug 20/09 | 17 | mg/L | No |
| Cadmium | Aug 20/09 | n/d | mg/L | No |
| Chromium | Aug 20/09 | n/d | mg/L | No |
| *Lead | Aug 20/09 | n/d | mg/L | No |
| Mercury | Aug 20/09 | n/d | mg/L | No |
| Selenium | Aug 20/09 | n/d | mg/L | No |
| Sodium | Nov 26/09 | 0.0098 | mg/L | No |
| Uranium | Aug 20/09 | 0.1 | mg/L | No |
| Fluoride | Nov 26/09 | 0.6 | mg/L | No |
| Nitrite | Nov 26/09 | n/d | mg/L | No |
| Nitrate | Nov 26/09 | 0.1 | 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 | 0 | 0 | 0 |
| Distribution | 0 | 0 | 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 | Aug 20/09 | n/d | mg/L | No |
| Aldicarb | Aug 20/09 | n/d | mg/L | No |
| Aldrin + Dieldrin | Aug 20/09 | n/d | mg/L | No |
| Atrazine + N-dealkylated metabolites | Aug 20/09 | n/d | mg/L | No |
| Azinphos-methyl | Aug 20/09 | n/d | mg/L | No |
| Bendiocarb | Aug 20/09 | n/d | mg/L | No |
| Benzene | Aug 20/09 | n/d | mg/L | No |
| Benzo(a)pyrene | Aug 20/09 | n/d | mg/L | No |
| Bromoxynil | Aug 20/09 | n/d | mg/L | No |
| Carbaryl | Aug 20/09 | n/d | mg/L | No |
| Carbofuran | Aug 20/09 | n/d | mg/L | No |
| Carbon Tetrachloride | Aug 20/09 | n/d | mg/L | No |
| Chlordane (Total) | Aug 20/09 | n/d | mg/L | No |
| Chlorpyrifos | Aug 20/09 | n/d | mg/L | No |
| Cyanazine | Aug 20/09 | n/d | mg/L | No |
| Diazinon | Aug 20/09 | n/d | mg/L | No |
| Dicamba | Aug 20/09 | n/d | mg/L | No |
| 1,2-Dichlorobenzene | Aug 20/09 | n/d | mg/L | No |
| 1,4-Dichlorobenzene | Aug 20/09 | n/d | mg/L | No |
| Dichlorodiphenyltrichloroethane (DDT) + metabolites | Aug 20/09 | n/d | mg/L | No |
| 1,2-Dichloroethane | Aug 20/09 | n/d | mg/L | No |
| 1,1-Dichloroethylene (vinylidene chloride) | Aug 20/09 | n/d | mg/L | No |
| Dichloromethane | Aug 20/09 | n/d | mg/L | No |
| 2-4 Dichlorophenol | Aug 20/09 | n/d | mg/L | No |
| 2,4-Dichlorophenoxy acetic acid (2,4-D) | Aug 20/09 | n/d | mg/L | No |
| Diclofop-methyl | Aug 20/09 | n/d | mg/L | No |
| Dimethoate | Aug 20/09 | n/d | mg/L | No |
| Dinoseb | Aug 20/09 | n/d | mg/L | No |
| Diquat | Aug 20/09 | n/d | mg/L | No |
| Diuron | Aug 20/09 | n/d | mg/L | No |



| | | | | |
|---|----------------|------|------|----|
| Glyphosate | Aug 20/09 | n/d | mg/L | No |
| Heptachlor + Heptachlor Epoxide | Aug 20/09 | n/d | mg/L | No |
| Lindane (Total) | Aug 20/09 | n/d | mg/L | No |
| Malathion | Aug 20/09 | n/d | mg/L | No |
| Methoxychlor | Aug 20/09 | n/d | mg/L | No |
| Metolachlor | Aug 20/09 | n/d | mg/L | No |
| Metribuzin | Aug 20/09 | n/d | mg/L | No |
| Monochlorobenzene | Aug 20/09 | n/d | mg/L | No |
| Paraquat | Aug 20/09 | n/d | mg/L | No |
| Parathion | Aug 20/09 | n/d | mg/L | No |
| Pentachlorophenol | Aug 20/09 | n/d | mg/L | No |
| Phorate | Aug 20/09 | n/d | mg/L | No |
| Picloram | Aug 20/09 | n/d | mg/L | No |
| Polychlorinated Biphenyls(PCB) | Aug 20/09 | n/d | mg/L | No |
| Prometryne | Aug 20/09 | n/d | mg/L | No |
| Simazine | Aug 20/09 | n/d | mg/L | No |
| THM (NOTE: show latest annual average) | Yearly Average | 43.0 | ugL | No |
| Temephos | Aug 20/09 | n/d | mg/L | No |
| Terbufos | Aug 20/09 | n/d | mg/L | No |
| Tetrachloroethylene | Aug 20/09 | n/d | mg/L | No |
| 2,3,4,6-Tetrachlorophenol | Aug 20/09 | n/d | mg/L | No |
| Triallate | Aug 20/09 | n/d | mg/L | No |
| Trichloroethylene | Aug 20/09 | n/d | mg/L | No |
| 2,4,6-Trichlorophenol | Aug 20/09 | n/d | mg/L | No |
| 2,4,5-Trichlorophenoxy acetic acid (2,4,5-T) | Aug 20/09 | n/d | mg/L | No |
| Trifluralin | Aug 20/09 | n/d | mg/L | No |
| Vinyl Chloride | Aug 20/09 | n/d | mg/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 |
|------------------|---------------------|------------------------|-----------------------|
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