



**OPTIONAL ANNUAL REPORT TEMPLATE**

|  |  |
|--|--|
| <b>Drinking-Water System Number:</b>   | 260003279                                  |
| <b>Drinking-Water System Name:</b>     | City of St. Catharines Distribution System |
| <b>Drinking-Water System Owner:</b>    | Corporation of the City of St. Catharines  |
| <b>Drinking-Water System Category:</b> | Large Municipal Residential (pop. 130,000) |
| <b>Period being reported:</b>          | January 1, 2014 – December 31, 2014        |

|  |   |
|--|---|
| <p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p><b>Does your Drinking-Water System serve more than 10,000 people? Yes [ X ] No [ ]</b></p> <p><b>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ X ] No [ ]</b></p> <p><b>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</b></p> <div style="border: 1px solid black; padding: 5px;"> <p>Lake Street Service Centre<br/>383 Lake Street, St. Catharines, ON<br/>L2N 4H5 -and-<br/>City Hall<br/>50 Church Street, St. Catharines, ON<br/>L2R 7C2</p> </div> | <p><b><u>Complete for all other Categories.</u></b></p> <p><b>Number of Designated Facilities served:</b><br/> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> </p> <p><b>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</b></p> <p><b>Number of Interested Authorities you report to:</b> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div></p> <p><b>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</b></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 [ ] N/A**

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-Reports are available at various Public Education Displays**

**Describe your Drinking-Water System**

The City of St. Catharines owns and operates a Class II stand-alone residential water distribution system. The City receives its drinking water from the Regional Municipality of Niagara Decew Water Treatment Plant. The source water is surface water from Lake Erie via an intake from the Welland Canal.

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

n/a

**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**

The 2014 water improvement program budget was \$5,500,000. This budget allowed for the replacement or upgrade of 5,885 m of existing watermain and the installation of 485 m of new watermain.

**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 |
|-------------------|----------------|--------|-----------------|-------------------|------------------------|
| March 6, 2014     | Total Coliform | 20     | cfu/100mL       | Flush, resample   | March 7/8, 2014        |
| July 8, 2014      | Free Chlorine  | 0.01   | mg/L            | Flush, resample   | July 8, 2014           |
| July 28, 2014     | Free Chlorine  | 0.02   | mg/L            | Flush, resample   | July 28, 2014          |
| September 9, 2014 | Free Chlorine  | 0.00   | mg/L            | Flush, resample   | September 9, 2014      |
| October 9, 2014   | Free Chlorine  | 0.03   | mg/L            | Flush, resample   | October 9, 2014        |
| October 15, 2014  | Total Coliform | 27     | cfu/100mL       | Flush, resample   | October 16/17, 2014    |
| November 3, 2014  | Free Chlorine  | 0.00   | mg/L            | Flush, resample   | November 3, 2014       |
| November 14, 2014 | Free Chlorine  | 0.00   | mg/L            | Flush, resample   | November 14, 2014      |

**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          |                   |  |   |                       |                                      |
| Treated      |                   |  |   |                       |                                      |
| Distribution | 1744              | 0  | 0-27  | 901                   | 0-96                                 |

**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 #) | Unit of Measure |
|---|------------------------|----------------------------------|-----------------|
| Turbidity                                   |                        |                                  |                 |
| Chlorine                                    | 3014                   | 0.00-2.05                        | mg/L            |
| Fluoride (If the DWS provides fluoridation) |                        |                                  |                 |

*NOTE: For continuous monitors use 8760 as the number of*

**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                             |           |              |        |                 |

**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  |             |              |                 |            |
| Arsenic   |             |              |                 |            |
| Barium    |             |              |                 |            |
| Boron     |             |              |                 |            |
| Cadmium   |             |              |                 |            |
| Chromium  |             |              |                 |            |
| *Lead     |             |              |                 |            |
| Mercury   |             |              |                 |            |
| Selenium  |             |              |                 |            |
| Sodium    |             |              |                 |            |
| Uranium   |             |              |                 |            |
| Fluoride  |             |              |                 |            |
| Nitrite   |             |              |                 |            |
| Nitrate   |             |              |                 |            |



\*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 #) | Unit of Measure | Number of Exceedances |
|---------------------|-------------------|--|-----------------|-----------------------|
| <b>Plumbing</b>     | 135               | <0.001-0.045                           | mg/L            | 3                     |
| <b>Distribution</b> | 19                | <0.001                                 | mg/L            | 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  |             |              |                 |            |
| Aldicarb  |             |              |                 |            |
| Aldrin + Dieldrin                                   |             |              |                 |            |
| Atrazine + N-dealkylated metabolites                |             |              |                 |            |
| Azinphos-methyl                                     |             |              |                 |            |
| Bendiocarb  |             |              |                 |            |
| Benzene   |             |              |                 |            |
| Benzo(a)pyrene                                      |             |              |                 |            |
| Bromoxynil  |             |              |                 |            |
| Carbaryl  |             |              |                 |            |
| Carbofuran  |             |              |                 |            |
| Carbon Tetrachloride                                |             |              |                 |            |
| Chlordane (Total)                                   |             |              |                 |            |
| Chlorpyrifos  |             |              |                 |            |
| Cyanazine   |             |              |                 |            |
| Diazinon  |             |              |                 |            |
| Dicamba   |             |              |                 |            |
| 1,2-Dichlorobenzene                                 |             |              |                 |            |
| 1,4-Dichlorobenzene                                 |             |              |                 |            |
| Dichlorodiphenyltrichloroethane (DDT) + metabolites |             |              |                 |            |
| 1,2-Dichloroethane                                  |             |              |                 |            |
| 1,1-Dichloroethylene (vinylidene chloride)          |             |              |                 |            |
| Dichloromethane                                     |             |              |                 |            |
| 2,4 Dichlorophenol                                  |             |              |                 |            |
| 2,4-Dichlorophenoxy acetic acid (2,4-D)             |             |              |                 |            |
| Diclofop-methyl                                     |             |              |                 |            |
| Dimethoate  |             |              |                 |            |
| Dinoseb   |             |              |                 |            |



|   |                       |        |      |   |
|---|-----------------------|--------|------|---|
| Diquat  |                       |        |      |   |
| Diuron  |                       |        |      |   |
| Glyphosate                                      |                       |        |      |   |
| Heptachlor + Heptachlor Epoxide                 |                       |        |      |   |
| Lindane (Total)                                 |                       |        |      |   |
| Malathion                                       |                       |        |      |   |
| Methoxychlor                                    |                       |        |      |   |
| Metolachlor                                     |                       |        |      |   |
| Metribuzin                                      |                       |        |      |   |
| Monochlorobenzene                               |                       |        |      |   |
| Paraquat  |                       |        |      |   |
| Parathion                                       |                       |        |      |   |
| Pentachlorophenol                               |                       |        |      |   |
| Phorate   |                       |        |      |   |
| Picloram  |                       |        |      |   |
| Polychlorinated Biphenyls(PCB)                  |                       |        |      |   |
| Prometryne                                      |                       |        |      |   |
| Simazine  |                       |        |      |   |
| THM<br>(NOTE: show latest annual average)       | January –<br>December | 0.0637 | mg/L | 0 |
| Temephos  |                       |        |      |   |
| Terbufos  |                       |        |      |   |
| Tetrachloroethylene                             |                       |        |      |   |
| 2,3,4,6-Tetrachlorophenol                       |                       |        |      |   |
| Triallate                                       |                       |        |      |   |
| Trichloroethylene                               |                       |        |      |   |
| 2,4,6-Trichlorophenol                           |                       |        |      |   |
| 2,4,5-Trichlorophenoxy acetic acid<br>(2,4,5-T) |                       |        |      |   |
| Trifluralin                                     |                       |        |      |   |
| Vinyl Chloride                                  |                       |        |      |   |

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       | 0.0543       | mg/L            | April 11, 2014 |
| THM       | 0.0557       | mg/L            | April 11, 2014 |
| THM       | 0.0515       | mg/L            | April 11, 2014 |
| THM       | 0.0532       | mg/L            | April 11, 2014 |
| THM       | 0.0504       | mg/L            | April 11, 2014 |
| THM       | 0.0818       | mg/L            | July 4, 2014   |
| THM       | 0.0719       | mg/L            | July 4, 2014   |
| THM       | 0.0633       | mg/L            | July 4, 2014   |
| THM       | 0.0658       | mg/L            | July 4, 2014   |

|            |        |      |                 |
|------------|--------|------|-----------------|
| <b>THM</b> | 0.0635 | mg/L | July 4, 2014    |
| <b>THM</b> | 0.0680 | mg/L | July 4, 2014    |
| <b>THM</b> | 0.0654 | mg/L | July 4, 2014    |
| <b>THM</b> | 0.0744 | mg/L | July 4, 2014    |
| <b>THM</b> | 0.0596 | mg/L | October 9, 2014 |
| <b>THM</b> | 0.0566 | mg/L | October 9, 2014 |
| <b>THM</b> | 0.0527 | mg/L | October 9, 2014 |
| <b>THM</b> | 0.0587 | mg/L | October 9, 2014 |
| <b>THM</b> | 0.0693 | mg/L | October 9, 2014 |
| <b>THM</b> | 0.0508 | mg/L | October 9, 2014 |
| <b>THM</b> | 0.0567 | mg/L | October 9, 2014 |
| <b>THM</b> | 0.0586 | mg/L | October 9, 2014 |