



OPTIONAL ANNUAL REPORT TEMPLATE

<b>Drinking-Water System Number:</b>	220 008 104
<b>Drinking-Water System Name:</b>	Creighton Heights Water Supply System
<b>Drinking-Water System Owner:</b>	The Corporation of the Township of Hamilton
<b>Drinking-Water System Category:</b>	Large Municipal Residential-Water Treatment System Class 2
<b>Period being reported:</b>	January 1 <sup>st</sup> - December 31 <sup>st</sup> , 2016

<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 [ 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;"> <p>8285 Majestic Hills Drive Cobourg, ON. K9A 4J7</p> </div>	<p><b><u>Complete for all other Categories.</u></b></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 [ ] No [ ]</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 [ ] No [ ]</p>
--	---

Indicate how you notified system users that your annual report is available, and is free of charge.

- [ X ] Public access/notice via the web
- [ X ] 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
- [ x ] Public access/notice via other method \_\_\_\_\_



**Describe your Drinking-Water System**

**Three drilled wells are located on-site in front of the treatment plant. The treatment plant building houses treatment and pumping equipment, chemical feed systems, a filtration system for iron, manganese and turbidity removal/ control, filter residuals management system, ultraviolet disinfection equipment, methane removal equipment, reservoir, high lift pumping, stand-by diesel generator, instrumentation and control equipment, SCADA system, and associated electrical controls and appurtances.**

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

**12% sodium hypochlorite  
Potassium Permanganate  
Sodium Thiosulphate**

**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**

**Well pump in Well 6 replaced during Well Inspection scheduled for 2016. Well 6 was videoed and well screen was cleaned. Expenses incurred for new pump and rehabilitation work \$12,000**

**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**

<b>Incident Date</b>	<b>Parameter</b>	<b>Result</b>	<b>Unit of Measure</b>	<b>Corrective Action</b>	<b>Corrective Action Date</b>
<b>09/13/16</b>	<b>Loss of pressure</b>			<b>BWA, flush, sample</b>	<b>09/16/16</b>

**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	151	0 - 0	0 - 1	0	NA
Treated	52	0 - 0	0 - 0	52	0 - 37
Distribution	113	0 - 0	0 - 0	53	0 - 680

**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 #)
Chlorine	8760	.14 – 3.69

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

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

**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
08/18/16 Licence #139-102	Suspended solids	03/08/16	29	mg/l
		06/27/16	12.66	
		09/18/16	5.33	
		12/14/16	29	
08/18/16 Licence #139-102	Chlorine residual	03/08/16	.25	mg/l
		06/27/16	.52	
		09/18/16	.32	
		12/14/16	.63	

**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	06/02/15	0.02<MDL	ug/l	no
Arsenic	“	0.2<MDL	“	“
Barium	“	17.7	“	“
Boron	“	72.9	“	“
Cadmium	“	0.003<MDL	“	“
Chromium	06/02/15	0.06	ug/l	no
*Lead	NA	NA	“	“
Mercury	06/02/15	.01<MDL	“	“
Selenium	“	1< MDL	“	“



<b>Sodium</b>	05/22/12	23.6	mg/l	
<b>Uranium</b>	06/02/15	0.002<MDL	ug/l	“
<b>Fluoride</b>	05/22/12	.30	mg/l	“
<b>Nitrite</b>	03/09/16	.021	mg/l	“
	06/07/16	.029		
	09/19/16	.011		
	12/05/16	.013		
<b>Nitrate</b>	03/09/16	.010	mg/l	“
	06/07/16	.019		
	09/19/16	.006		
	12/05/16	.007		

\*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:**

Lead sampled according to Schedule D of Municipal Drinking Water Licence 139-102

<b>Location Type</b>	<b>Date</b>	<b>Sample Location</b>	<b>pH</b>	<b>Alkalinitymg/l as CaCO3</b>	<b>Lead ug/l</b>
<b>Distribution</b>	<b>04/04/16</b>	<b>Balt Arena</b>	<b>7.32</b>	<b>203</b>	
	<b>04/04/16</b>	<b>Balt F.H.</b>	<b>7.55</b>	<b>206</b>	
	<b>04/04/16</b>	<b>45South</b>	<b>7.62</b>	<b>199</b>	
	<b>04/04/16</b>	<b>Hydrant24</b>	<b>7.61</b>	<b>201</b>	
<b>Distribution</b>	<b>10/12/16</b>	<b>Hwy45</b>	<b>7.6</b>	<b>200</b>	
	<b>10/12/16</b>	<b>Deerfield</b>	<b>7.3</b>	<b>197</b>	
	<b>10/12/16</b>	<b>Van Luven</b>	<b>7.5</b>	<b>196</b>	
	<b>10/12/16</b>	<b>Burwash</b>	<b>7.4</b>	<b>196</b>	

**Summary of Organic parameters sampled during this reporting period or the most recent sample results**

<b>Parameter</b>	<b>Sample Date</b>	<b>Result Value</b>	<b>Units</b>	<b>Exceedance</b>
<b>Alachlor</b>	<b>06/02/15</b>	<b>.02&lt;MDL</b>	<b>ug/l</b>	<b>no</b>
<b>Aldicarb</b>	“	<b>.02&lt;MDL</b>	“	“
<b>Aldrin + Dieldrin</b>	“	<b>.01&lt;MDL</b>	“	“
<b>Aldrin</b>	“	<b>.01&lt;MDL</b>	“	“
<b>Dieldrin</b>	“	<b>.01&lt;MDL</b>	“	“
<b>Atrazine + N-dealkylated metabolites</b>	“	<b>.01&lt;MDL</b>	“	“
<b>Atrazine</b>	“	<b>.01&lt;MDL</b>	“	“
<b>Azinphos-methyl</b>	“	<b>.02&lt;MDL</b>	“	“
<b>Bendiocarb</b>	“	<b>.01&lt;MDL</b>	“	“



Benzene	“	.32<MDL	“	“
Benzo(a)pyrene	“	.0004<MDL	“	“
Bromoxynil	“	.33<MDL	“	“
Carbaryl	“	.01<MDL	“	“
Carbofuran	“	.01<MDL	“	“
Carbon Tetrachloride	“	.16<MDL	“	“
Chlordane (Total)	“	.01<MDL	“	“
Chlorpyrifos	“	.02<MDL	“	“
Cyanazine	“	.03<MDL	“	“
Desethyl atrazine	“	.01<MDL	“	“
Diazinon	“	.02<MDL	“	“
Dicamba	“	.20<MDL	“	“
1,2-Dichlorobenzene	“	.41<MDL	“	“
1,4-Dichlorobenzene	“	.36>MDL	“	“
Dichlorodiphenyltrichloroethane (DDT) + metabolites	“	.01<MDL	“	“
1,2-Dichloroethane	“	.35<MDL	“	“
1,1-Dichloroethylene (vinylidene chloride)	“	.33<MDL	“	“
Dichloromethane	“	.35<MDL	“	“
2-4 Dichlorophenol	“	.15<MDL	“	“
2,4-Dichlorophenoxy acetic acid (2,4-D)	“	.19<MDL	“	“
Diclofop-methyl	“	.40<MDL	“	“
Dimethoate	“	.03<MDL	“	“
Dinoseb	“	.36<MDL	“	“
Diquat	“	1<MDL	“	“
Diuron	“	.03<MDL	“	“
Glyphosate	“	1<MDL	“	“
Heptachlor + Heptachlor Epoxide	“	.01<MDL	“	“
Lindane (Total)	“	.01<MDL	“	“
Malathion	“	.02<MDL	“	“
Methoxychlor	“	.01<MDL	“	“
Metolachlor	“	.01<MDL	“	“
Metribuzin	“	.02<MDL	“	“
Monochlorobenzene	“	.3<MDL	“	“
Paraquat	“	1<MDL	“	“
Parathion	“	.02<MDL	“	“
Pentachlorophenol	“	.15<MDL	“	“
Phorate	“	.01<MDL	“	“
Picloram	“	1<MDL	“	“
Polychlorinated Biphenyls(PCB)	“	.04<MDL	“	“
Prometryne	“	.03<MDL	“	“
Simazine	“	.01<MDL	“	“



<b>THM</b> (NOTE: show latest annual average)	<b>03/09/16</b> <b>06/07/16</b> <b>09/19/16</b> <b>12/05/16</b>	<b>1.175 RAA</b>	“	“
<b>Temephos</b>	<b>06/02/15</b>	<b>.01&lt;MDL</b>	“	“
<b>Terbufos</b>	“	<b>.01&lt;MDL</b>	“	“
<b>Tetrachloroethylene</b>	“	<b>.35&lt;MDL</b>	“	“
<b>2,3,4,6-Tetrachlorophenol</b>	“	<b>.20&lt;MDL</b>	“	“
<b>Triallate</b>	“	<b>.01&lt;MDL</b>	“	“
<b>Trichloroethylene</b>	“	<b>.44&lt;MDL</b>	“	“
<b>2,4,6-Trichlorophenol</b>	“	<b>.25&lt;MDL</b>	“	“
<b>2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)</b>	“	<b>.22&lt;MDL</b>	“	“
<b>Trifluralin</b>	“	<b>.02&lt;MDL</b>	“	“
<b>Vinyl Chloride</b>	“	<b>.17&lt;MDL</b>	“	“