



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	220 008 104
Drinking-Water System Name:	Creighton Heights Water Supply System
Drinking-Water System Owner:	The Corporation of the Township of Hamilton
Drinking-Water System Category:	Large Municipal Residential-Water Treatment System Class 2
Period being reported:	January 1 st - December 31 st , 2017

<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 [] 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><u>Complete for all other Categories.</u></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.

- 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

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 appurtenances.

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

**Media replacement in Greensand filter \$15,000
Water meter replacement program initiated \$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
06/09/17	Sodium	27.2	Mg/L	Notify Health Unit, notify residents	06/12/17



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	155	0 - 0	0 -83	0	NA
Treated	52	0 - 0	0 - 0	52	0 - 234
Distribution	113	0 - 0	0 - 0	53	0 - 100

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	365	.16 – 2.82

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	03/16/17	12.66	mg/l
		06/20/17	9.66	
		09/21/17	15.33	
		12/28/17	10.66	
08/18/16 Licence #139-102	Chlorine residual	03/16/17	.64	mg/l
		06/20/17	.17	
		09/21/17	.15	
		12/28/17	.19	

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	“	“



Sodium	06/05/17	27.2	mg/l	
Uranium	06/02/15	0.002<MDL	ug/l	“
Fluoride	06/05/17	.34	mg/l	“
Nitrite	03/20/17 06/05/17 09/21/17 12/11/17		mg/l	“
Nitrate	03/20/17 06/05/17 09/21/17 12/11/17		mg/l	“

*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

Location Type	Date	Sample Location	pH	Alkalinitymg/l as CaCO3	Lead ug/l
Distribution	03/27/17	Van Luven	7.8	205	
		Burwash	7.8	205	
Distribution	09/18/17	Van Luven	7.8	211	
		Hwy 45	7.8	196	

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

Parameter	Sample Date	Result Value	Units	Exceedance
Alachlor	06/02/15	.02<MDL	ug/l	no
Aldicarb	“	.02<MDL	“	“
Aldrin + Dieldrin	“	.01<MDL	“	“
Aldrin	“	.01<MDL	“	“
Dieldrin	“	.01<MDL	“	“
Atrazine + N-dealkylated metabolites	“	.01<MDL	“	“
Atrazine	“	.01<MDL	“	“
Azinphos-methyl	“	.02<MDL	“	“
Bendiocarb	“	.01<MDL	“	“
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	“	“
Haloacetic Acid HAA	03/20/17 06/05/17 09/21/17 12/11/17	5.3<MDL 8.2ug/L 6.1ug/L 5.3<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	“	“



THM (NOTE: show latest annual average)	03/20/17 06/05/17 09/18/17 12/11/17	1.55 RAA	“	“
Temephos	06/02/15	.01<MDL	“	“
Terbufos	“	.01<MDL	“	“
Tetrachloroethylene	“	.35<MDL	“	“
2,3,4,6-Tetrachlorophenol	“	.20<MDL	“	“
Triallate	“	.01<MDL	“	“
Trichloroethylene	“	.44<MDL	“	“
2,4,6-Trichlorophenol	“	.25<MDL	“	“
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	“	.22<MDL	“	“
Trifluralin	“	.02<MDL	“	“
Vinyl Chloride	“	.17<MDL	“	“