



ANNUAL REPORT

Drinking-Water System Number:	220001110
Drinking-Water System Name:	Coldwater Water Supply and Distribution
Drinking-Water System Owner:	The Corporation of the Township of Severn
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2017 to December 31, 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>Township of Severn Administrative Office 1024 Hurlwood Lane Severn, Ontario L3V 0Y6</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input 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 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>
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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
Riverwalk Estates Drinking Water System	260095277

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 [X] 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

The Coldwater water supply system was built in 1994 to replace the spring water supply west of the village. Water now comes from three (3) drilled groundwater wells. Two are located on the pump house property and the third is across the street from the pump house, on private property. In 2008, an addition was completed to the WTP to house two GAC filters, a softener and a backwash settling tank. Raw water is partially softened before passing through the GAC filters (operated in series). Filtered water is then chlorinated using Sodium Hypochlorite. Treated water is store in a 1,612 m³ two-cell, concrete, underground reservoir below the pump house. The reservoir provides the required chlorine contact time to achieve primary disinfection before it is distributed to the residents. The treated water is then pumped from the reservoir to the distribution system via a jockey pump and two (2) vertical turbine pumps. A fire pump is also installed to provide adequate flow in the event of a fire. There are 86 fire hydrants, 10 sampling stations and 5 blow-offs connected to the system. The distribution system is comprised of PVC water mains. The system services approximately 1,400 residents of the Village of Coldwater.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite
Softener Salt

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

Replacement of GAC filter media - \$40,000
 New watermain and sample station - \$81,000
 New sample station - \$3,200
 High lift pump rebuild - \$20,500
 Two (2) new peristaltic chlorine pumps - \$11,000

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
Oct. 19, 2017	New watermain valve installation	Boil Water Advisory	N/A	Sampled. All samples within compliance.	Oct. 23, 2017

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 – Well #1	54	0 - 0	0 - 0	N/A	-
Raw – Well #2	57	0 - 0	0 – 3	N/A	-
Raw – Well #3	52	0 - 0	0 – 0	N/A	-
Treated	52	0 - 0	0 – 0	N/A	-
Distribution	164	0 - 0	0 - 0	71	0 - 4

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 – Well #1	12	0.10 – 0.28 NTU
Turbidity – Well #2	12	0.43 – 0.86 NTU
Turbidity – Well #3	12	0.12 – 0.44 NTU
Turbidity	8760	0.17 – 0.66 NTU
Chlorine	8760	0.67 – 1.03
Chlorine Free Residual Distribution System	364	0.50 – 1.02
Fluoride (If the DWS provides fluoridation)	N/A	

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
July 29, 2011	TSS	Annual Average	6.42	mg/L



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	Oct. 26, 2015	0.06	µg/L	No
Arsenic	Oct. 26, 2015	0.8	µg/L	No
Barium	Oct. 26, 2015	284	µg/L	No
Boron	Oct. 26, 2015	63.5	µg/L	No
Cadmium	Oct. 26, 2015	<0.003	µg/L	No
Chromium	Oct. 26, 2015	0.33	µg/L	No
*Lead	N/A			
Mercury	Oct. 26, 2015	<0.01	µg/L	No
Selenium	Oct. 26, 2015	0.70	µg/L	No
Sodium	Oct. 2, 2017	91.6	mg/L	Yes
Uranium	Oct. 26, 2015	0.822	µg/L	No
Fluoride	Oct. 21, 2013	0.11	mg/L	No
Nitrite	January 9, 2017 April 3, 2017 July 10, 2017 October 2, 2017	0.07 <0.003 <0.003 <0.003	mg/L	No
Nitrate	January 9, 2017 April 3, 2017 July 10, 2017 October 2, 2017	<0.006 <0.006 <0.006 <0.006	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			
Distribution	4	0.12 – 0.92	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	Oct. 26, 2015	<0.02	µg/L	No
Aldicarb	Oct. 26, 2015	<0.01	µg/L	No
Aldrin + Dieldrin	Oct. 26, 2015	<0.01	µg/L	No
Atrazine + N-dealkylated metabolites	Oct. 26, 2015	<0.01	µg/L	No
Azinphos-methyl	Oct. 26, 2015	<0.05	µg/L	No
Bendiocarb	Oct. 26, 2015	<0.01	µg/L	No

Benzene	Oct. 26, 2015	<0.32	µg/L	No
Benzo(a)pyrene	Oct. 26, 2015	<0.004	µg/L	No
Bromoxynil	Oct. 26, 2015	<0.33	µg/L	No
Carbaryl	Oct. 26, 2015	<0.05	µg/L	No
Carbofuran	Oct. 26, 2015	<0.01	µg/L	No
Carbon Tetrachloride	Oct. 26, 2015	<0.16	µg/L	No
Chlordane (Total)	Oct. 26, 2015	<0.01	µg/L	No
Chlorpyrifos	Oct. 26, 2015	<0.02	µg/L	No
Cyanazine	Oct. 26, 2015	<0.03	µg/L	No
Diazinon	Oct. 26, 2015	<0.02	µg/L	No
Dicamba	Oct. 26, 2015	<0.20	µg/L	No
1,2-Dichlorobenzene	Oct. 26, 2015	<0.41	µg/L	No
1,4-Dichlorobenzene	Oct. 26, 2015	<0.36	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Oct. 26, 2015	<0.01	µg/L	No
1,2-Dichloroethane	Oct. 26, 2015	<0.35	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Oct. 26, 2015	<0.33	µg/L	No
Dichloromethane	Oct. 26, 2015	<0.35	µg/L	No
2-4 Dichlorophenol	Oct. 26, 2015	<0.15	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Oct. 26, 2015	<0.19	µg/L	No
Diclofop-methyl	Oct. 26, 2015	<0.40	µg/L	No
Dimethoate	Oct. 26, 2015	<0.03	µg/L	No
Dinoseb	Oct. 26, 2015	<0.36	µg/L	No
Diquat	Oct. 26, 2015	<1	µg/L	No
Diuron	Oct. 26, 2015	<0.03	µg/L	No
Glyphosate	Oct. 26, 2015	<1	µg/L	No
Heptachlor + Heptachlor Epoxide	Oct. 26, 2015	<0.01	µg/L	No
Haloacetic Acids (HAA5) (NOTE: show latest annual average)	2017 Average	5.3	µg/L	No
Lindane (Total)	Oct. 26, 2015	<0.01	µg/L	No
Malathion	Oct. 26, 2015	<0.02	µg/L	No
Methoxychlor	Oct. 26, 2015	<0.01	µg/L	No
Metolachlor	Oct. 26, 2015	<0.01	µg/L	No
Metribuzin	Oct. 26, 2015	<0.02	µg/L	No
Monochlorobenzene	Oct. 26, 2015	<0.3	µg/L	No
Paraquat	Oct. 26, 2015	<1	µg/L	No
Parathion	Oct. 26, 2015	<0.02	µg/L	No
Pentachlorophenol	Oct. 26, 2015	<0.15	µg/L	No
Phorate	Oct. 26, 2015	<0.01	µg/L	No
Picloram	Oct. 26, 2015	<1	µg/L	No
Polychlorinated Biphenyls(PCB)	Oct. 26, 2015	<0.04	µg/L	No
Prometryne	Oct. 26, 2015	<0.03	µg/L	No
Simazine	Oct. 26, 2015	<0.01	µg/L	No
THM (NOTE: show latest annual average)	2017 Average	6.49	µg/L	No
Temephos	Oct. 26, 2015	<0.01	µg/L	No
Terbufos	Oct. 26, 2015	<0.01	µg/L	No



Tetrachloroethylene	Oct. 26, 2015	<0.35	µg/L	No
2,3,4,6-Tetrachlorophenol	Oct. 26, 2015	<0.20	µg/L	No
Triallate	Oct. 26, 2015	<0.01	µg/L	No
Trichloroethylene	Oct. 26, 2015	<0.44	µg/L	No
2,4,6-Trichlorophenol	Oct. 26, 2015	<0.25	µg/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Oct. 26, 2015	<0.22	µg/L	No
Trifluralin	Oct. 26, 2015	<0.02	µg/L	No
Vinyl Chloride	Oct. 26, 2015	<0.17	µg/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
Sodium	91.6	mg/L	October 2, 2017