

OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	DWS 220008765
Drinking-Water System Name:	Chepstow Drinking Water System
Drinking-Water System Owner:	Municipality of Brockton
Drinking-Water System Category:	Small Municipal Residential
Period being reported:	January 1, 2018 to December 31, 2018

<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 website 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; margin-top: 10px;"> <p>Municipality of Brockton 100 Scott St., Box 68 Walkerton, ON N0G 2V0 (519) 881-2223</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [x] No []</p> <p>Number of Interested Authorities you report to:</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
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 [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

Chepstow Powers Subdivision water system comprises of a 150 mm bedrock well drilled to a depth of 57.6 m with approximately 15.8 m of till overburden. The well is equipped with a 1.1 kW submersible pump rated at 2.21 L/s at a TDH of 414 kpa. The pumphouse is located on top of the well and houses chlorine pumps utilizing sodium hypochlorite, 2 sets of two-stage filtration (5 micron and 1 micron) filters, followed by 2 Ultraviolet units. The water then enters a chlorine contact loop and is delivered to the distribution system with pressure maintenance provided by 3 – 455 L cushion tanks. The system has a standby diesel generator for emergency situations that was installed in 2011.

List all water treatment chemicals used over this reporting period

NSF Certified Sodium Hypochlorite (12%)

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

There were no major expenses incurred

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
May 5, 2018	Low chlorine residual which did not meet required C.T. value of 0.28 mg/L AWQI # 139253	0.27	mg/L	Notified MOE and MOH. Repaired chlorine leak on the chlorine board. Restored disinfection and flushed the system.	May 5, 2018
June 20, 2018	Low chlorine residual which did not meet required C.T. value of 0.28 mg/L AWQI # 139960	0.08	mg/L	Notified MOE and MOH. Restored disinfection. Repaired chlorine line leak and took residuals throughout the distribution system.	June 20, 2018
Oct. 23, 2018	Received Fluoride sample result that exceeded the MAC of 1.5 mg/L AWQI # 143681	1.70	mg/L	Resampled and notified the health unit. Received resample result of 1.74 mg/L. Delivered the fluoride information package received from the health unit to the system users.	Nov. 01, 2018

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	12	0 - 0	0 - 0		
Distribution	52	0 - 0	0 - 0	52	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 #)
Filtered Effluent Turbidity	365	0.04 – 0.42 ntu
Chlorine	365	0.68 – 1.72
Chlorine Dist.	236	0.78 – 1.59
Fluoride (If the DWS provides fluoridation)		

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
January 1, 2018	HAA (Haloacetic Acid)	Jan. 09, 2018	5.3	ug/L
		April 10, 2018	2.1	
		July 10, 2018	4.0	
		Oc. 16, 2018	4.3	

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	Feb.20,2018	<0.6	ug/L	
Arsenic	Feb.20,2018	<1.0	ug/L	
Barium	Feb.20,2018	179	ug/L	
Boron	Feb.20,2018	<50	ug/L	
Cadmium	Feb.20,2018	<0.1	ug/L	
Chromium	Feb.20,2018	<1.0	ug/L	
Lead	Oct. 16, 2018	<1.0	ug/L	
Mercury	Feb.20,2018	<0.1	ug/L	
Selenium	Feb.20,2018	<5.0	ug/L	
Sodium	Oct. 16, 2018	5.49	mg/L	
Uranium	Feb.20,2018	<5.0	ug/L	
Fluoride	Oct. 16, 2018 Oct. 23, 2018	1.70 1.74	ug/L	Yes - Public Notified
Nitrite				
1 st Quarter	Jan. 9, 2018	<0.1	mg/L	
2 nd Quarter	Apr. 10, 2018	<0.01		
3 rd Quarter	Jul. 10, 2018	<0.01		
4 th Quarter	Oct. 16, 2018	<0.01		

Nitrate	Jan. 9, 2018	<0.1	mg/L	
1 st Quarter	Apr. 10, 2018	<0.02		
2 nd Quarter	Jul. 10, 2018	<0.02		
3 rd Quarter	Oct. 16, 2018	<0.02		
4 th Quarter				

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	Feb.20,2018	<0.1	ug/L	
Atrazine + N-dealkylated metabolites	Feb.20,2018	<0.2	ug/L	
Azinphos-methyl	Feb.20,2018	<0.1	ug/L	
Benzene	Feb.20,2018	<0.5	ug/L	
Benzo(a)pyrene	Feb.20,2018	<0.01	ug/L	
Bromoxynil	Feb.20,2018	<0.2	ug/L	
Carbaryl	Feb.20,2018	<0.2	ug/L	
Carbofuran	Feb.20,2018	<0.2	ug/L	
Carbon Tetrachloride	Feb.20,2018	<0.2	ug/L	
Chlorpyrifos	Feb.20,2018	<0.1	ug/L	
Diazinon	Feb.20,2018	<0.1	ug/L	
Dicamba	Feb.20,2018	<0.2	ug/L	
1,2-Dichlorobenzene	Feb.20,2018	<0.5	ug/L	
1,4-Dichlorobenzene	Feb.20,2018	<0.5	ug/L	
1,2-Dichloroethane	Feb.20,2018	<0.5	ug/L	
1,1-Dichloroethylene (vinylidene chloride)	Feb.20,2018	<0.5	ug/L	
Dichloromethane	Feb.20,2018	<5.0	ug/L	
2-4 Dichlorophenol	Feb.20,2018	<0.3	ug/L	
2,4-D (2,4-Dichlorophenoxy acetic acid)	Feb.20,2018	<0.2	ug/L	
Diclofop-methyl	Feb.20,2018	<0.2	ug/L	
Dimethoate	Feb.20,2018	<0.1	ug/L	
Diquat	Feb.20,2018	<1.0	ug/L	
Diuron	Feb.20,2018	<1.0	ug/L	
Glyphosate	Feb.20,2018	<5.0	ug/L	
MCPA (2-Methyl-4-chlorophenoxyacetic acid)	Feb.20,2018	<0.2		
Malathion	Feb.20,2018	<0.1	ug/L	
Metolachlor	Feb.20,2018	<0.1	ug/L	
Metribuzin	Feb.20,2018	<0.1	ug/L	
Monochlorobenzene	Feb.20,2018	<0.5	ug/L	
Paraquat	Feb.20,2018	<1.0	ug/L	
Pentachlorophenol	Feb.20,2018	<0.5	ug/L	
Phorate	Feb.20,2018	<0.1	ug/L	

Picloram	Feb.20,2018	<0.2	ug/L	
Polychlorinated Biphenyls(PCB)	Feb.20,2018	<35	ug/L	
Prometryne	Feb.20,2018	<0.1	ug/L	
Simazine	Feb.20,2018	<0.1	ug/L	
THM (NOTE: show latest annual average)	2018 Average	4.7	ug/L	
Terbufos	Feb.20,2018	<0.2	ug/L	
Tetrachloroethylene	Feb.20,2018	<0.5	ug/L	
2,3,4,6-Tetrachlorophenol	Feb.20,2018	<0.5	ug/L	
Triallate	Feb.20,2018	<0.1	ug/L	
Trichloroethylene	Feb.20,2018	<0.5	ug/L	
2,4,6-Trichlorophenol	Feb.20,2018	<0.5	ug/L	
Trifluralin	Feb.20,2018	<0.1	ug/L	
Vinyl Chloride	Feb.20,2018	<0.2	ug/L	

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
Fluoride	1.70	mg/l	Oct. 16, 2018
Fluoride	1.74	mg/l	Oct. 23, 2018