



Township of Perth East  
2025 Annual Drinking Water Report  
Shakespeare Drinking Water System

**The Corporation of the Township of Perth East**

25 Mill Street East  
P.O. Box 455  
Milverton, Ontario  
N0K 1M0

January 26, 2026

ATTN: Mr. Michael Givens, CAO

**Re: The Corporation of the Township of Perth East  
2025 Shakespeare Drinking Water Annual & Summary Report**

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Please find enclosed the Township of Perth East's 2025 Drinking Water Annual Report and Summary Report for the Shakespeare Drinking Water System. The reports are prepared in accordance with Ontario Regulation 170/03 of the Safe Drinking Water Act.

Under Ontario Regulation 170/03, the Annual Report must cover the period from January 1 to December 31 each year and must be prepared by February 28 of the subsequent year. The Annual Report is to be made available free of charge to anyone whom requests a copy.

Ontario Regulation 170/03 additionally requires the preparation of a Summary Report for the preceding year which must be presented to Council no later than March 31.

A copy of the reports will be available at the Township Office at 25 Mill Street East in Milverton in addition to the Township website at [www.pertheast.ca](http://www.pertheast.ca).

Any questions or concerns regarding the reports can be directed to Public Works Department.

Sincerely,

A handwritten signature in black ink that reads "Jake Collings".

Jake Collings, P. Eng.  
Township of Perth East  
Manager of Public Works



**The Corporation of the Township of Perth East  
2025 Annual Report & Summary Report  
Shakespeare Drinking Water System**

**Date: January 26, 2026**



**Part 1 – ANNUAL REPORT** (as required by O. Reg. 170/03, Section 11)

<b>Drinking-Water System Number:</b>	260002317
<b>Drinking-Water System Name:</b>	Shakespeare Drinking Water System
<b>Drinking-Water System Owner:</b>	Township of Perth East
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Reporting Period:</b>	January 1, 2025 to December 31, 2025

Complete if your Category is Large Municipal Residential or Small Municipal Residential		Complete for all other Categories	
<i>Does your Drinking-Water System serve more than 10,000 people?</i>	<b>No</b>	<i>Number of Designated Facilities served:</i>	<b>0</b>
<i>Is your Annual Report available to the public at no charge on a web site on the Internet?</i>	<b>Yes</b>	<i>Did you provide a copy of your Annual Report to all Designated Facilities you serve?</i>	<b>N/A</b>
<i>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection:</i> <b>Township of Perth East, Municipal Office            25 Mill Street East, Milverton, Ontario            PO Box 455            N0K 1M0</b>		<i>Number of Interested Authorities you report to:</i>	<b>0</b>
		<i>Did you provide a copy of your Annual Report to all Interested Authorities you report to for each Designated Facility?</i>	<b>N/A</b>

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	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?
N/A



Indicate how you notified system users that your annual report is available and free of charge:					
Public access/ notice via the web	<input checked="" type="checkbox"/>	Public access/ notice via a newspaper		Public access/ notice via Public Request	<input checked="" type="checkbox"/>
Public access/ notice via Government Office	<input checked="" type="checkbox"/>	Public access/ notice via a Public Library		Public access/ notice via other method	

Describe your Drinking Water System
<p>The Shakespeare Drinking Water system is a Class II Distribution and Supply sub-system owned and operated by the Township of Perth East. The serviced population is approximately 439 and consists of 2.8 kilometers of distribution water mains.</p> <p>The well house facility is situated at 2171 Miller Street in Shakespeare, Ontario. Raw water is conveyed to the well house and treated using liquid sodium hypochlorite which is injected using two (2) chemical feed pumps rated at 14 L/day and single storage tank. Water is then pressurized using six (6) 300L fiberglass pressure tanks and finally transferred to an 8.27m<sup>3</sup> concrete chamber for the necessary chlorine contact time on its way to the distribution system.</p> <p>The system water supply consists of two drilled groundwater wells. Well #1 is located at the south end of the site and is comprised of an 85.0 meter deep, 150 mm diameter casing equipped with a submersible pump rated at 410 L/min but restricted to 379.0 L/min with a flow restrictor.</p> <p>Well #2 is located approximately at the north end of the site and is comprised of a 88.4 meter deep 210 mm diameter casing, equipped with submersible pump rated at 378 L/min and is complete with a variable frequency drive (VFD).</p>

List all water treatment chemicals used over this reporting period:
Liquid Chlorine (Sodium Hypochlorite) 6%

Were any significant expenses incurred to?	
Install required equipment:	No
Repair required equipment:	No
Replace required equipment:	No

Please provide a brief description and a breakdown of monetary expenses incurred:	
Description	Cost
N/A	



**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 Center:**

Incident Date (MM/DD/YYYY)	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date (MM/DD/YYYY)
08/13/2025	Total Coliform	1	CFU/ 100 mL	Resample @ source, upstream & downstream.	08/13/2025
10/03/2025	Arsenic	75.8	µg/L	Resample @ source, upstream & downstream.	10/10/2025

**Microbiological testing done under Schedule 10, 11 or 12 of O. Reg. 170/03 during this reporting period:**

Description	Number of Samples	Range of E.coli Or Fecal Results (min. #) – (max. #)	Range of Total Coliform Results (min. #) – (max. #)	Range of HPC Results (min. #) – (max. #)	Range of Background Results (min. #) – (max. #)
Well # 1 - Raw	52	0-0	0-1	N/A	0-9
Well # 2 - Raw	52	0-0	0-2	N/A	0-2
Treated	53	0-0	0-1	0-30	0-0
Blow Off # 1	52	0-0	0-0	0-20	0-0
Blow Off # 2	52	0-0	0-0	0-0	0-0

**Operational testing done under Schedule 7, 8 or 9 of O. Reg. 170/03 during the reporting period:**

Description	Number of Grab Samples	Range of Results (min. #) – (max. #)
Turbidity (NTU)		
Turbidity – Well #1	12	0.07 - 0.37 NTU
Turbidity – Well #2	12	0.20 – 0.42 NTU
Chlorine Residual (mg/L)		
Chlorine – Point of Entry (POE)	8760	0.00* - 3.76* mg/L

\* Values due to operator maintenance on chlorine analyzer

**Summary of additional testing & 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:**

**Shakespeare – Treated Water**

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Aug. 11/ 2025	0.60	µg/L	No
Arsenic	Jan. 20/ 2025	11.2	µg/L	Yes
Arsenic	Feb. 11/ 2025	12.1	µg/L	Yes
Arsenic	Mar. 24/ 2025	13.4	µg/L	Yes
Arsenic	Apr. 22/ 2025	11.8	µg/L	Yes
Arsenic	May 20/ 2025	12.1	µg/L	Yes
Arsenic	Jun. 23/ 2025	10.4	µg/L	Yes
Arsenic	Jul. 28/ 2025	11.7	µg/L	Yes
Arsenic	Aug. 11/ 2025	11.3	µg/L	Yes
Arsenic	Sep. 29/ 2025	75.8	µg/L	Yes
Arsenic (Re-sample)	Oct. 3/ 2025	11.6	µg/L	Yes
Arsenic	Oct. 27/ 2025	14.1	µg/L	Yes
Arsenic	Nov. 17/ 2025	11.7	µg/L	Yes
Arsenic	Dec. 29/ 2025	11.5	µg/L	Yes
Barium	Aug. 11/ 2025	86	µg/L	No
Boron	Aug. 11/ 2025	31	µg/L	No
Cadmium	Aug. 11/ 2025	0.003	µg/L	No
Chromium	Aug. 11/ 2025	0.08	µg/L	No
Mercury	Aug. 11/ 2025	0.01	µg/L	No
Selenium	Aug. 11/ 2025	0.04	µg/L	No
Sodium	Aug. 11/ 2025	11.9	mg/L	No
Uranium	Aug. 11/ 2025	0.299	µg/L	No
Fluoride	Feb. 11/ 2025	0.80	mg/L	No
Nitrite	Feb. 11/ 2025	0.003	mg/L	No
Nitrite	May 26/ 2025	0.003	mg/L	No
Nitrite	Aug. 11/ 2025	0.003	mg/L	No
Nitrite	Nov. 17/ 2025	0.003	mg/L	No
Nitrate	Feb. 11/ 2025	0.006	mg/L	No
Nitrate	May 26/ 2025	0.006	mg/L	No
Nitrate	Aug. 11/ 2025	0.006	mg/L	No
Nitrate	Nov. 17/ 2025	0.006	mg/L	No



Summary of Lead testing under Schedule 15.1 during this reporting period:			
Location Type	Number of Samples	Range of Lead Results (min. #) – (max. #)	Number of Exceedances
Plumbing	N/A	N/A	N/A
Distribution	N/A	N/A	N/A

Summary of Organic parameters tested during this reporting period or the most recent sample results:				
Shakespeare – Treated Water				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Aug. 11/ 2025	0.02	µg/L	No
Atrazine + N-dealkylated metabolites	Aug. 11/ 2025	0.01	µg/L	No
Azinphos-methyl	Aug. 11/ 2025	0.05	µg/L	No
Benzene	Aug. 11/ 2025	0.32	µg/L	No
Benzo(a)pyrene	Aug. 11/ 2025	0.004	µg/L	No
Bromoxynil	Aug. 11/ 2025	0.33	µg/L	No
Carbaryl	Aug. 11/ 2025	0.05	µg/L	No
Carbofuran	Aug. 11/ 2025	0.01	µg/L	No
Carbon Tetrachloride	Aug. 11/ 2025	0.17	µg/L	No
Chlorpyrifos	Aug. 11/ 2025	0.02	µg/L	No
Diazinon	Aug. 11/ 2025	0.02	µg/L	No
Dicamba	Aug. 11/ 2025	0.20	µg/L	No
1,2-Dichlorobenzene	Aug. 11/ 2025	0.41	µg/L	No
1,4-Dichlorobenzene	Aug. 11/ 2025	0.36	µg/L	No
1,2-Dichloroethane	Aug. 11/ 2025	0.35	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	Aug. 11/ 2025	0.33	µg/L	No
Dichloromethane	Aug. 11/ 2025	0.35	µg/L	No
2,4-Dichlorophenol	Aug. 11/ 2025	0.15	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Aug. 11/ 2025	0.19	µg/L	No
Diclofop-methyl	Aug. 11/ 2025	0.40	µg/L	No
Dimethoate	Aug. 11/ 2025	0.06	µg/L	No
Diquat	Aug. 11/ 2025	1.0	µg/L	No
Diuron	Aug. 11/ 2025	0.03	µg/L	No
Glyphosate	Aug. 11/ 2025	1.0	µg/L	No



Malathion	Aug. 11/ 2025	0.02	µg/L	No
2 Methyl-4-chlorophenoxyacetic acid (MCPA)	Aug. 11/ 2025	0.00012	µg/L	No
Metolachlor	Aug. 11/ 2025	0.01	µg/L	No
Metribuzin	Aug. 11/ 2025	0.02	µg/L	No
Monochlorobenzene	Aug. 11/ 2025	0.3	µg/L	No
Paraquat	Aug. 11/ 2025	1.0	µg/L	No
Pentachlorophenol	Aug. 11/ 2025	0.15	µg/L	No
Phorate	Aug. 11/ 2025	0.01	µg/L	No
Picloram	Aug. 11/ 2025	1.0	µg/L	No
Polychlorinated Biphenyls (PCB)	Aug. 11/ 2025	0.04	µg/L	No
Prometryne	Aug. 11/ 2025	0.03	µg/L	No
Simazine	Aug. 11/ 2025	0.01	µg/L	No
Terbufos	Aug. 11/ 2025	0.01	µg/L	No
Tetrachloroethylene (perchloroethylene)	Aug. 11/ 2025	0.35	µg/L	No
2,3,4,6-Tetrachlorophenol	Aug. 11/ 2025	0.20	µg/L	No
Triallate	Aug. 11/ 2025	0.01	µg/L	No
Trichloroethylene	Aug. 11/ 2025	0.44	µg/L	No
2,4,6-Trichlorophenol	Aug. 11/ 2025	0.25	µg/L	No
Trifluralin	Aug. 11/ 2025	0.02	µg/L	No
Vinyl Chloride	Aug. 11/ 2025	0.17	µg/L	No

<b>Haloacetic Acids (HAAs)</b>				
HAAs (Running Annual Average) Quarter 1	Feb. 11/ 2025	5.4	µg/L	No
HAAs (Running Annual Average) Quarter 2	May 26/ 2025	5.3	µg/L	No
HAAs (Running Annual Average) Quarter 3	Aug. 11/ 2025	5.3	µg/L	No
HAAs (Running Annual Average) Quarter 4	Nov. 17/ 2025	5.3	µg/L	No

<b>Trihalomethanes (THMs)</b>				
THMs (Running Annual Average) Quarter 1	Feb. 11/ 2025	13.1	µg/L	No
THMs (Running Annual Average) Quarter 2	May 26/ 2025	12.8	µg/L	No
THMs (Running Annual Average) Quarter 3	Aug. 11/ 2025	12.3	µg/L	No
THMs (Running Annual Average) Quarter 4	Nov. 17/ 2025	12.3	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
Arsenic	11.2	µg/L	Jan. 20/ 2025
Arsenic	12.1	µg/L	Feb. 11/ 2025
Arsenic	13.4	µg/L	Mar. 24/ 2025
Arsenic	11.8	µg/L	Apr. 22/ 2025
Arsenic	12.1	µg/L	May 20/ 2025
Arsenic	10.4	µg/L	Jun. 23/ 2025
Arsenic	11.7	µg/L	Jul. 28/ 2025
Arsenic	11.3	µg/L	Aug. 11/ 2025
Arsenic	75.8	µg/L	Sep. 29/ 2025
Arsenic (Re-sample)	11.6	µg/L	Oct. 3/ 2025
Arsenic	14.1	µg/L	Oct. 27/ 2025
Arsenic	11.7	µg/L	Nov. 17/ 2025
Arsenic	11.5	µg/L	Dec. 29/ 2025
Fluoride	0.80	mg/L	Feb. 11/ 2025
Sodium	11.9	mg/L	Feb. 11/ 2025



**Part 2 – SUMMARY REPORT** (as required by O. Reg. 170/03, Schedule 22)

<b>Non-Compliance with Legislations, Regulations, Approvals &amp; Orders</b>		
<p>The MECP conducted an announced routine inspection of the Shakespeare Drinking Water System on <b>August 6, 2025</b>. During this period, it was determined that the Facility was operated in full compliance with the Act, the regulations and the Facility’s Municipal Drinking Water Licence, Drinking Water Works Permit and Permit to Take Water, save and except for the following:</p>		
<i>Requirement</i>	<i>Duration of Failure</i>	<i>Measures to Correct the Failure</i>

<b>Well #1</b>						
<b>System Capability Assessment</b>						
Month	Average Flow (m <sup>3</sup> /day)	Maximum Flow (m <sup>3</sup> /day)	Total Monthly Flow (m <sup>3</sup> )	Maximum Flow Rate (L/min)	Approved Flow Rate (L/min)	System Capacity (m <sup>3</sup> /day)
January	42.89	47.88	1329.59	311.09	<b>379</b>	<b>545.76</b>
February	42.51	50.30	1190.39	311.35		
March	42.09	48.79	1304.80	311.56		
April	44.44	58.41	1333.34	312.23		
May	41.73	56.59	1293.77	312.37		
June	48.60	70.27	1458.01	315.19		
July	47.64	67.56	1476.76	314.53		
August	48.20	61.05	1494.16	313.08		
September	42.37	54.08	1271.23	312.96		
October	40.13	116.27	1244.04	319.25		
November	37.82	43.38	1134.73	312.24		
December	44.31	57.57	1373.65	317.36		
<i>Average</i>	43.56		1325.37	313.60		
<i>Maximum</i>		116.27	1494.16	319.25		
<i>% of Capacity</i>	7.98	21.30				



<b>Well #2</b>						
<b>System Capability Assessment</b>						
Month	Average Flow (m <sup>3</sup> /day)	Maximum Flow (m <sup>3</sup> /day)	Total Monthly Flow (m <sup>3</sup> )	Maximum Flow Rate (L/min)	Approved Flow Rate (L/min)	System Capacity (m <sup>3</sup> /day)
January	43.15	48.66	1337.72	293.35	<b>379</b>	<b>545.76</b>
February	42.72	51.98	1196.20	293.67		
March	42.51	50.22	1317.86	293.68		
April	44.63	58.82	1338.86	294.39		
May	41.82	57.38	1296.57	293.67		
June	48.12	69.61	1443.56	296.47		
July	47.52	66.36	1473.16	298.11		
August	48.23	61.41	1495.05	295.07		
September	42.44	55.05	1273.12	294.07		
October	38.04	46.95	1179.14	298.34		
November	37.93	43.19	1137.80	290.64		
December	44.18	56.96	1369.49	303.78		
<i>Average</i>	43.44		1321.54	295.44		
<i>Maximum</i>		69.61	1495.05	303.78		
<i>% of Capacity</i>	7.96	12.75				



<b>Combined</b>					
Month	Average Flow (m <sup>3</sup> /day)	Maximum Flow (m <sup>3</sup> /day)	Total Monthly Flow (m <sup>3</sup> )	Approved Flow Rate (L/min)	System Capacity (m <sup>3</sup> /day)
January	86.04	96.54	2667.31	<b>Well 1: 379 Well 2: 379</b>	<b>545.76</b>
February	85.23	102.28	2386.59		
March	84.6	99.01	2622.66		
April	89.07	117.23	2672.2		
May	83.55	113.97	2590.34		
June	96.72	139.88	2901.57		
July	95.16	133.92	2949.92		
August	96.43	122.46	2989.21		
September	84.81	109.13	2544.35		
October	78.17	163.22	2423.18		
November	75.75	86.57	2272.53		
December	88.49	114.53	2743.14		
<i>Average</i>	87.00		2646.92		
<i>Maximum</i>		163.22	2989.21		
<i>% of Capacity</i>	15.94%	29.91%			