



**Ontario Clean Water Agency**  
**Agence Ontarienne Des Eaux**

February 19, 2025

Janet Denkers  
Corporation of the Municipality of Brooke-Alvinston  
3236 River St.  
P.O Box 28  
Alvinston, ON N0N 1A0

Re: Requirement under the Safe Drinking Water Act for a Summary Report

Dear Janet Denkers

Attached is the 2024 Summary Report for the Alvinston Distribution System for January 1<sup>st</sup> to December 31<sup>st</sup>, 2024. This report is completed in accordance with Section 11 and Schedule 22 of O. Reg. 170/03, under the Safe Drinking Water Act.

This Summary Report is to be provided to the members of council by March 31<sup>st</sup>, 2025.

Section 12 of O. Reg. 170/03, requires the Annual Report required under Section 11 of O. Reg. 170/03 to be made available for inspection by any member of the public during normal business hours, without charge. The reports should be made available for inspection at the office of the Municipality, or at a location that is reasonably convenient to the users of the water system.

Please feel free to contact me should you require any additional information regarding these reports. I can be reached at 519-312-0847.

Sincerely,

A handwritten signature in black ink, appearing to read 'Terri-Lynn Thomson'.

Terri-Lynn Thomson  
Process and Compliance Technician

cc. Sam Sianas OCWA Regional Manager  
Sam Smith, OCWA Senior Operations Manager  
Maegan Garber, OCWA Safety, Process and Compliance Manager  
Stephen Ikert, Brooke- Alvinston

# Alvinston Distribution System

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Waterworks # 260040170  
System Category – Large Municipal Residential

## Annual Water Report

Prepared For: The Corporation of the Municipality of Brooke-  
Alvinston

Reporting Period of January 1<sup>st</sup> – December 31<sup>st</sup>, 2024

Issued: Feb 19<sup>th</sup>, 2025

Revision: 0

Operating Authority:



This report has been prepared to satisfy the annual reporting requirements in O.Reg 170/03 Section 11 and Schedule 22.

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## Revision History

Date	Revision #	Revision Notes
2025-02-19	0	Report Issued

## Report Availability

This system does not serve more than 10,000 people and the annual reports will be available to residents at the Municipality of Brooke-Alvinston Municipal Office. Notification will be at the Municipal Office and copies provided free of charge, if requested. The Brooke-Alvinston Municipal Office is located at, 3236 River Street in the Town of Alvinston.

## Compliance Report Card

Compliance Event	# of Events
Ministry of Environment Inspections	1
Ministry of Labour Inspections	0
QEMS External Audit	1
AWQI's/BWA	0
Non-Compliance	0
Community Complaints	0
Spills	0
Watermain Breaks	1

## System Process Description

### Distribution

The Alvinston Drinking Water System is supplied with potable water via a 250mm diameter PVC watermain from the Lambton Area Water Supply System (LAWSS). The supply meter chamber is located on the southeast corner of Old Walnut Rd. and Churchill Line. The Old Walnut meter chamber is equipped with a flowmeter. From here, water continues through the Distribution System through the Alvinston Rechlorination Station located at 3188 Church St. The station provides level control to the standpipe through a PRV and CAV, and maintenance of secondary disinfection (as required). The secondary disinfection system at the pumping station consists of two chemical feed pumps (one duty and one standby), a chemical feed line upstream of the PRV and continuous feed chlorine analyzers upstream and downstream of the PRV. The distribution system also includes a 1,544 m3 standpipe

equipped with a continuous online free chlorine analyzer, various air valve chambers, fire hydrants, two water service meter chambers and piping of various sizes.

Standby power is available in the event of a power failure/outage.

### Treatment Chemicals

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Secondary Disinfection	Jutzi

## Summary of Non-Compliance

### Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
There were no adverse water quality incidents reported during the reporting period.						

### Non-Compliance

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There were no non-compliance issues reported during the reporting period.				

### Non-Compliance Identified in a Ministry Inspection

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There were no non-compliance issues reported during the reporting period.				

The Alvinston Distribution System was operated and maintained in such a manner that the water supplied to the consumers serviced by the system satisfies the Ontario Drinking Water Quality Standards.

The Alvinston Distribution System was inspected on June 25<sup>th</sup>, 2024 by Dwayne Reid of the Ministry of the Environment, Conservation and Parks (MECP) for the review period of May 25, 2023- May 31, 2024. There were no non-compliances identified and three best management practices. An inspection rating of 100% was received.

The best management practices recommended were as follows:

- The owner and/or operating authority did not undertake efforts to promote water conservation and/or reduce water losses in their system. The Operating Authority indicated there is no formal water conservation plan. However, customers are fully metered, and a leak detection survey was recently conducted.

- There was no bylaw or policy in place limiting access to hydrants. The Operating Authority indicated there is no by-law to limit access to hydrants. It is recommended that the Owner develop a by-law to limit access to hydrants.
- The overflow for the standpipe is equipped with a rubber duckbill cover. The Operating Authority could not confirm whether or not there is a screen located within the pipe. The Ministry recommends that #4 mesh (5.16 mm) non-corrodible screen be used for overflows and vents of elevated storage tanks. The screen should be installed inside the overflow pipe at a location least susceptible to damage.

## Flows

The Alvinston Distribution System is operated in accordance with Municipal Drinking Water Licence 240-101, and Drinking Water Works Permit 240-201. There are no rated capacities specified in the Municipal Drinking Water Licence.

In accordance with Schedule 22-2(3) 1, find a summary and discussion of the quantity of water supplied during the reporting period.

### Old Walnut Flows

The Alvinston Distribution System is supplied by the Lambton Area Water Supply System (LAWSS). The flow is metered at the Old Water metering station as it enters the Alvinston Distribution system. The volume supplied in 2024 was 110,762m<sup>3</sup>. This is a 21.3% increase from the volume supplied in 2023.

	2023 Alvinston Walnut (m3)	2024 Alvinston Walnut (m3)	2023 Alvinston Walnut Avg Day Flow (m3/d)	2024 Alvinston Walnut Avg Day Flow (m3/d)	% difference 2024 to 2023	2023 Alvinston Walnut Max Day Flow (m3)	2024 Alvinston Walnut Max Day Flow (m3)
<b>January</b>	6263.9	8294.8	202.1	267.6	32.4	248.7	307.0
<b>February</b>	6136.6	7535.0	219.2	259.8	18.6	282.2	303.0
<b>March</b>	8538.6	8305.5	275.4	267.9	-2.7	625.7	297.0
<b>April</b>	7012.3	8212.1	233.7	273.7	17.1	310.3	314.5
<b>May</b>	9261.5	9832.8	298.8	317.2	6.2	493.5	427.6
<b>June</b>	8420.3	9149.6	280.7	305.0	8.7	493.5	408.5
<b>July</b>	7852.6	9214.6	253.3	297.2	17.3	300.0	348.6
<b>August</b>	7692.4	9307.4	248.1	300.2	21.0	273.9	425.0
<b>September</b>	7565.0	9935.3	252.2	331.2	31.3	277.0	389.5
<b>October</b>	7799.2	10576.1	251.6	341.2	35.6	292.7	369.2
<b>November</b>	7125.6	9984.4	237.5	332.8	40.1	444.0	369.8
<b>December</b>	7469.2	10414.5	240.3	336.0	39.8	269.0	381.5

<b>Total</b>	91137.2	110762.1				
Avg	7594.8	9230.2	249.4	302.6	21.3	
Max					625.7	427.6

**Alvinston Rechlorination Station Flows**

The water supplied by LAWSS travels through the Alvinston Rechlorination Station. The station provides level control to the standpipe through a PRV and CAV before being directed to consumers. The flow is metered on the outlet of the station. The volume supplied from the Alvinston Rechlorination Station in 2024 was 76,948 m<sup>3</sup>.

	2023 Alvinston Rechlorination Station (m3)	2024 Alvinston Rechlorination Station (m3)	2023 Alvinston Rechlorination Station Avg Day Flow (m3/d)	2024 Alvinston Rechlorination Station Avg Day Flow (m3/d)	% difference 2024 to 2023	2023 Alvinston Rechlorination Station Max Day Flow (m3)	2024 Alvinston Rechlorination Station Max Day Flow (m3)
<b>January</b>	5365.3	5775.0	173.1	186.3	7.6	217.5	230.7
<b>February</b>	5001.3	5099.5	178.6	175.9	-1.6	218.0	221.3
<b>March</b>	5638.6	5556.9	181.9	179.3	-1.4	218.0	250.7
<b>April</b>	5511.3	5581.9	183.7	186.1	1.3	235.0	260.0
<b>May</b>	7525.5	6629.5	242.8	213.9	-11.9	357.5	296.0
<b>June</b>	6894.8	6711.2	229.8	223.7	-2.7	360.0	356.5
<b>July</b>	6239.1	6509.0	201.3	210.0	4.3	261.0	335.0
<b>August</b>	5821.5	6555.4	187.8	211.5	12.6	279.5	295.5
<b>September</b>	5734.2	6947.3	191.1	231.6	21.2	243.5	415.5
<b>October</b>	6057.5	7675.6	195.4	247.6	26.7	240.7	310.5
<b>November</b>	5399.9	7149.0	180.0	238.3	32.4	245.0	279.0
<b>December</b>	5284.0	6758.0	170.5	218.0	27.9	211.0	253.5
<b>Total</b>	70473.0	76948.2					
Avg	5872.8	6412.4	193.0	210.2	8.9		
Max						360.0	415.5

## Regulatory Sample Results Summary

### Microbiological Testing

	No. of Samples Collected	Range of E.Coli Results		Range of Total Coliform Results		No. of Samples Collected	Range of HPC Results	
		Min	Max	Min	Max		Min	Max
Distribution Water	159	0	0	0	0	53	<10	20

### Operational Testing

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
Free Chlorine Residual, DW Field (mg/L)	368	0.50	1.63

### Summary of Lead Testing:

Schedule 15.1 sampling is required under O.Reg 170/03. This system is under reduced sampling requiring lead samples to be collected every 3<sup>rd</sup> year in the winter and summer period.

Distribution System	Number of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
		Minimum	Maximum		
Alkalinity (mg/L)	4	77	88	N/A	N/A
pH	4	7.42	8.06	N/A	N/A
Lead (ug/l)	N/A	N/A	N/A	N/A	N/A

### Organic Parameters

These parameters are tested quarterly as a requirement under O.Reg 170/03.

Distribution Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Trihalomethane: Total (ug/L) Annual Average-DW	2024	48.25	100	0	0
Haloacetic Acids: Total (ug/L) Annual Average-DW	2024	22.2	80	0	0

MAC = Maximum Allowable Concentration as per O.Reg 169/03

### Additional Legislated Samples

There is no additional sampling required in the Alvinston Distribution System.



## Major Maintenance Summary

### Distribution Maintenance

Details
Generator Repairs Leak Detection Survey