



March 4, 2025

The Corporation of the Municipality of Huron East
72 Main St. S
P.O. Box 610
Seaforth, ON
N0K 1W0

Attention: Brad McRoberts, CAO
RE: Vanastra Water Distribution System 2024 Annual Report

Dear Brad,

Please find attached the 2024 Annual Operations Report for the Vanastra Water System, in accordance with Section 11(1) of O. Reg. 170/03. This report covers the period from January 1 to December 31.

Please ensure that a copy of this report is given, without charge, to every person who requests a copy. In addition, please make certain that effective steps are taken to advise residents that copies of the report are available, and of how a copy can be obtained.

As per Schedule 22 of O. Reg. 170/03, please ensure that at least a copy of the Summary Report is given to the members of municipal council no later than March 31, 2025.

Finally, please ensure that a letter is sent to Jacobs verifying that this report has been received and accepted by Council.

If you have any questions regarding the report, we would be pleased to address them, and you should contact the undersigned accordingly.

Sincerely,

Jacobs (OMI Canada Inc.)

A handwritten signature in black ink, appearing to read "Chris Toulouse".

Christopher Toulouse
Project Manager
519-466-8450

cc. B. Mills, Municipality of Huron East
S. Bromley, Municipality of Huron East
J. Bloomfield, Jacobs Acting Area Manager

ANNUAL REPORT

Drinking-Water System Number:	210001585
Drinking-Water System Name:	Vanastra Water Distribution System
Drinking-Water System Owner:	The Corporation of the Municipality of Huron East
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	Jan 1st – Dec 31st, 2024

<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; margin-top: 10px;"> <p>Municipality of Huron East Town Office 72 Main St. S Box 610 Seaforth, ON N0K 1W0</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;">n/a</div> <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:</p> <div style="border: 1px solid black; padding: 2px; margin: 5px 0;">n/a</div> <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	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 [] 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

Water Distribution System Class 2.

The Vanastra Booster Station located at 12 5th Ave., Vanastra, Ontario receives treated groundwater from the Town of Clinton in the Municipality of Central Huron by way of a 150mm force main. The system provides re-chlorination and pressure boosting before entering the Vanastra Distribution Network. A 1135 m³ reservoir provides storage capacity for the Town and allows for adequate re-chlorination to occur.

Primary disinfection is completed within the Clinton Water Distribution system, while secondary disinfection is completed prior to water entering the reservoir by injection 12% sodium hypochlorite into the feed pipe of the reservoir. An online continuous chlorine analyzer measures free chlorine residual of the water leaving the reservoir as it is pumped into the distribution system. An online analyzer is placed at the Vanastra Sewage Treatment Plant and measures the distribution system free chlorine. Both analyzers are integrated into the SCADA system and have alarm capabilities 24-hours a day.

The facility utilizes three lift pumps to pump water from the reservoir into the Vanastra Distribution System which are controlled by the system pressures. Pump 1 and 2 are rated for 11.6 L/s, while pump 3 is rated for 105 L/s to allow for adequate fire flow rates.

The Vanastra Booster Station is equipped with a 125-kW diesel generator and automatic transfer switch to provide back-up power during utility power loss. This ensures that the distribution network pressures remain constant.

List all water treatment chemicals used over this reporting period

12% Sodium Hypochlorite Solution

Were any significant expenses incurred to?

- ☐ Install required equipment
- ☒ Repair required equipment
- ☒ Replace required equipment

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 10, 24	TC	1		Flush and resample	Oct 10, 24

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 #)
Reservoir Outlet	53	0	0	53	0
Distribution	109	0 - 0	0 - 1	54	<10 - >2000

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 #)	Unit of Measure
Treated Chlorine Online	8760	0 – 5.0	mg/l
Distribution Chlorine Online	8760	0 – 3.49	mg/l

NOTE: For continuous monitors use 8760 as the number of samples.

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

(<MDL: Below Minimum Detection Limit)				
Note: Sodium + Fluoride sampling required every 60 months. Inorganic sampling required every 36 months.				
Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	N/A		ug/L	
Arsenic	N/A		ug/L	
Barium	N/A		ug/L	
Boron	N/A		ug/L	
Cadmium	N/A		ug/L	

Chromium	N/A		ug/L	
Mercury	N/A		ug/L	
Selenium	N/A		ug/L	
Uranium	N/A		ug/L	
Sodium	N/A		mg/L	
Fluoride	N/A		mg/L	
Haloacetic Acids (HAA) (Running Annual Ave)	Q1 – Q4 2024 (Distributio)	5.30		Ug/L
Trihalomethanes (THM's) (Running Annual Ave)	Q1 – Q4 2024 (Distributio)	19.33		Ug/L

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)

Sampling Period	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Dec/23 – Apr/24	2	0.09 – 0.15	ug/L	No
Jun/24 – Oct/24	2	0.06 – 0.34	ug/L	No
Lead Sampling Conducted by Municipality				

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

(<MDL: Below Minimum Detection Limit) Note: Sampling required every 36 months.				
Parameter	Sample Date	Result Value Well #1	Unit of Measure	Exceedance
Alachlor	N/A		ug/L	
Atrazine + N-dealkylated metabolites	N/A		ug/L	
Atrazine	N/A		ug/L	
Azinphos-methyl	N/A		ug/L	

Benzene	N/A		ug/L	
Benzo(a)pyrene	N/A		ug/L	
Bromoxynil	N/A		ug/L	
Carbaryl	N/A		ug/L	
Carbofuran	N/A		ug/L	
Carbon Tetrachloride	N/A		ug/L	
Chlorpyrifos	N/A		ug/L	
Desethyl atrazine	N/A		ug/L	
Diazinon	N/A		ug/L	
Dicamba	N/A		ug/L	
1,2-Dichlorobenzene	N/A		ug/L	
1,4-Dichlorobenzene	N/A		ug/L	
1,2-Dichloroethane	N/A		ug/L	
1,1-Dichloroethylene (vinylidene	N/A		ug/L	
Dichloromethane	N/A		ug/L	
2-4 Dichlorophenol	N/A		ug/L	
2,4-Dichlorophenoxy acetic acid (2,4-	N/A		ug/L	
Diclofop-methyl	N/A		ug/L	
Dimethoate	N/A		ug/L	
Diquat	N/A		ug/L	
Diuron	N/A		ug/L	
Glyphosate	N/A		ug/L	
Malathion	N/A		ug/L	
MCPA	N/A		ug/L	
Metolachlor	N/A		ug/L	
Metribuzin	N/A		ug/L	
Monochlorobenzene	N/A		ug/L	
Paraquat	N/A		ug/L	
Pentachlorophenol	N/A		ug/L	
Phorate	N/A		ug/L	
Picloram	N/A		ug/L	
Polychlorinated Biphenyls(PCB's)	N/A		ug/L	
Prometryne	N/A		ug/L	
Simazine	N/A		ug/L	
Terbufos	N/A		ug/L	
Tetrachloroethylene	N/A		ug/L	
2,3,4,6-Tetrachlorophenol	N/A		ug/L	
Triallate	N/A		ug/L	
Trichloroethylene	N/A		ug/L	
2,4,6-Trichlorophenol	N/A		ug/L	
Trifluralin	N/A		ug/L	

Vinyl Chloride	N/A		ug/L	
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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	ODWQS limit