Jacobs

March 4, 2025

The Corporation of the Municipality of Huron East 72 Main St. S P.O. Box 610 Seaforth, ON NOK 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.)

Christopher Toulouse Project Manager 519-466-8450

cc. B. Mills, Municipality of Huron East

works

S. Bromley, Municipality of Huron East

J. Bloomfield, Jacobs Acting Area Manager



Drinking-Water Systems Regulation O. Reg. 170/03

ANNUAL REPORT

210001585 **Drinking-Water System Number: 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 Jan 1st – Dec 31st, 2024

Period being reported:

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [] No [x]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [x] No []

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Municipality of Huron East Town Office 72 Main St. S **Box 610** Seaforth, ON **N0K 1W0**

Complete for all other Categories.

Number of Designated Facilities served:

n/0	
n/a	

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes [] No []

Number of Interested Authorities you report to: n/a

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []

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.	
[x] Public access/notice via the web	
[x] Public access/notice via Government Office	
[] Public access/notice via a newspaper	
[x] 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 treat	ed
groundwater from the Town of Clinton in the Municipality of Central Huron by way	
150mm force main. The system provides re-chlorination and pressure boosting befor	
the Vanastra Distribution Network. A 1135 m ³ reservoir provides storage capacity fo	r the Town
and allows for adequate re-chlorination to occur.	
Primary disinfection is completed within the Clinton Water Distribution system, while	le
secondary disinfection is completed prior to water entering the reservoir by injection	
sodium hypochlorite into the feed pipe of the reservoir. An online continuous chlorine	
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	
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 Vanas	tro
Distribution System which are controlled by the system pressures. Pump 1 and 2 are	
11.6 L/s, while pump 3 is rated for 105 L/s to allow for adequate fire flow rates.	rated for
11.0 L/s, while pump 3 is faced for 103 L/s to allow for adequate fire flow faces.	
The Vanastra Booster Station is equipped with a 125-kW diesel generator and autom	atic
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	
[X] Repair required equipment	
[X] Replace required equipment	



Boron

Cadmium

N/A

Ontario Drinking-Water Systems Regulation O. Reg. 170/03

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	Parameter	Result	Unit of	Corrective Action	Corrective
Date			Measure		Action Date
Oct 10, 24	TC	1		Flush and	Oct 10, 24
				resample	

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	8760	0 - 5.0	mg/l
Online			O
Distribution	8760	0 - 3.49	mg/l
Chlorine Online			8

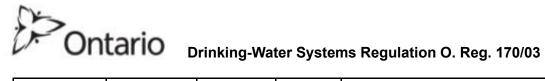
ug/L

ug/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 Result Unit of Exceedance Date Value Measure Antimony N/A ug/L N/A Arsenic ug/L Barium N/A ug/L N/A



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
Trihalomethane s (THM's) (Running Annual Ave)	Q1 – Q4 2024 (Distributio)	19.33		Ug/L

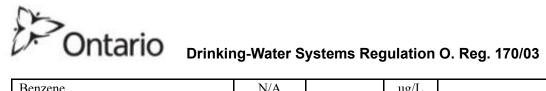
Summary of lead testing under Schedule 15.1 during this reporting period

(Applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

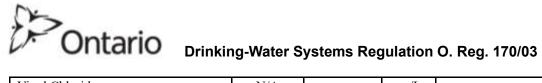
Sampling Period	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances			
Dec/23 – Apr/24	2	0.09 - 0.15	ug/L	No			
Jun/24 – Oct/24	2	0.06 - 0.34	ug/L	No			
Lead Sampling Conducted by Municipality							

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

(<mdl: 36="" below="" detection="" every="" limit)="" minimum="" months.<="" note:="" required="" sampling="" th=""></mdl:>						
Parameter Sample Date Value Well #1 Exceedance Weasure						
Alachlor	N/A		ug/L			
Atrazine + N-dealkylated metobolites	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	N/A	ug/L
(vinylidene		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



		I		T
I Vinyl Chloride	N/A		ug/L	
vinyi emeriae	1 1/1 1		45/ 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	ODWQS limit