

February 2024

Mayor Cheryl Fort and Council
The Corporation of the Township of Hornepayne
P.O. Box 370
Hornepayne, Ontario
P0M 1Z0

Re: O. Regulation 170 - 2023 Section 11 Annual Report for the Hornepayne Drinking-Water System

Ontario's Drinking-Water Systems Regulation (O.Reg. 170/03), made under the *Safe Drinking Water Act, 2002*, requires that the owner of a drinking water system prepare an annual report on the operation of the system and the quality of its water.

The annual report must cover the period of January 1st to December 31st in a year and must be prepared not later than February 28th of the following year. Pursuant to the legislative requirements, enclosed for your records is the 2023 Annual Report for the Hornepayne Drinking-Water System.

Pursuant to the legislative requirements, Section 11 (6): the annual report must:

- (a) Contain a brief description of the drinking-water system, including a list of water treatment chemicals used by the system during the period covered by the report;
- (b) Summarize any reports made to the Ministry under subsection 18 (1) of the Act or section 16-4 of Schedule 16 during the period covered by the report;
- (c) Summarize the results of tests required under this Regulation, or an approval or order, including an OWRA order, during the period covered by the report and, if tests required under this Regulation in respect of a parameter were not required during that period, summarize the most recent results of tests of that parameter;
- (d) Describe any corrective actions taken under Schedule 17 or 18 during the period covered by the report;
- (e) Describe any major expenses incurred during the period covered by the report to install, repair or replace required equipment; and
- (f) In the case of a large municipal residential system or a small municipal residential system, include a statement of where a report prepared under Schedule 22 will be available for inspection under subsection 12 (4). O. Reg. 170/03, s. 11 (6)

In addition, Section 11 (7) gives the direction that a copy of an annual report for the system is given, without charge, to every person who requests a copy and be made available for inspection by any member of the public during normal business hours. The reports should be made available at the office of the municipality, or at a location that is accessible to the users of the water system.

Yours truly,

Patrick Couture

Patrick Couture
Senior Operations Manager
Northwestern Ontario Regional Hub
807-228-2617

Copy to: Aileen Singh – CAO/Clerk
Duane Gaudreau – Public Works Manager
Operations Staff – Hornepayne WTP

2023 Section 11 Annual Report

Hornepayne Drinking Water System

February 2024

Prepared by the



Ontario Clean Water Agency
Agence Ontarienne Des Eaux



Section 11 ANNUAL REPORT

Drinking-Water System Number:	260092040
Drinking-Water System Name:	Herbert Avenue Water Treatment Plant
Drinking-Water System Owner:	The Corporation of the Township of Hornepayne
Drinking-Water System Category:	Large Municipal Residential Drinking Water-System
Period being reported:	January 1 – December 31, 2023

<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 [] No [X]</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;"> <p>Township of Hornepayne, Municipal Office 68 Front Street Hornepayne, ON P0M 1Z0</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <div style="border: 1px solid black; padding: 2px; display: inline-block;">N/A</div></p> <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: <div style="border: 1px solid black; padding: 2px; display: inline-block;">N/A</div></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	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 (Municipal)
 - 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

The raw water pumping station provides screening and chlorination if required for pre-disinfection/zebra mussel control. A standby diesel generator provides emergency power. The station pumps water approximately 5.5 km to the Herbert Avenue water treatment plant.

The Herbert Avenue Water Treatment Plant is a surface water treatment system providing coagulation, membrane filtration and primary/secondary disinfection. The treatment process consists of three membrane filter trains, each preceded by a flocculation tank with mixer. Coagulant and sulphuric acid are used in the flocculation process with the chemically treated water being fed directly to the filters. Filtered water is directed to a two-cell clear well with a total capacity of 280.2 m³ for treated water storage and post filtration disinfection. There is a third chamber, a high lift well containing the high lift pumps. Sodium hypochlorite is injected with the filtered water discharge for primary disinfection. Additional chlorine dosing is available at the plant discharge to distribution for the purpose of secondary disinfection. Sodium Hydroxide is used for pH adjustment of the treated water.

The town's original distribution system is approximately 40 years old. In the area of the standpipe the lines are approximately 25 years old. A variety of materials have been used for water mains in the distribution system including ductile iron, AC and PVC. PVC is now being used for all repairs/replacements. Fire hydrants are located throughout the distribution system which is well looped but has several lengthy dead ends. Depending on the elevation, the system pressure ranges from 60 – 105 psi. The distribution system includes a concrete pedestal standpipe (water tower) with a capacity of 1100m³. A separate pressure zone in the vicinity of the standpipe is normally kept at 60 psi. Water from the treatment plant can either enter the standpipe or supply the distribution and consumers directly. The valve at the tower remains in the open position and treated water flows in or out through the same piping. When the standpipe is full, high-lift pumps at the treatment plant shut-off and the distribution system is then supplied from the standpipe.

List all water treatment chemicals used over this reporting period

- Sulphuric Acid 50%
- Sodium hydroxide solution 25%
- Pax-XL 1900
- Sodium Hypochlorite Jex 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

Install	Repair	Replace	Description	Expense
	X		High Lift 2 repair	\$ 3,499.45
	X		Level Sensor Repair	\$ 7,004.60
	X		SCADA Troubleshooting - level sensor	\$ 8,591.43
		X	Water pump house fuel injector	\$ 9,322.03
			Reservoir ROV inspections	\$12,424.90
	X		Leak Detection - 74 Third Ave	\$ 6,935.70
	X		Leak Detection - 113 Herbert Ave & 94 Murphy lane	\$ 9,822.74
	X		Leak Detection - 264 Third Ave	\$ 10,834.85

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
2023/01/18	HAA Running Annual Average Exceedance Q1	200	ug/L		
2023/05/09	HAA Running Annual Average Exceedance Q2	156	ug/L		
2023/08/25	HAA Running Annual Average Exceedance Q3	162.2	ug/L		
2023/11/14	HAA Running Annual Average Exceedance Q4	133	ug/L		

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 (Surface) Water	41	0 – 2	0 – 190	N/A	N/A
Treated Water	51	0 – 0	0 – 0	51	10 - 20
Distribution	114	0 – 0	0 – 0	53	10 - 10

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 #)
Turbidity*		
Raw	150	0.02 – 2.26 NTU
Filter 1	8760	0.00 – 1.00 NTU
Filter 2	8760	0.00 – 0.48 NTU
Filter 3	8760	0.00 – 1.00 NTU
Treated	8760	0.02 – 10.0 NTU
Chlorine*		
Treated	8760	0.12 – 2.47
Distribution	459	0.33 – 2.18
Fluoride (If the DWS provides fluoridation)	N/A	N/A

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

** Turbidity & chlorine Min/Max (lows/highs) are due to planned maintenance and not plant upset.*

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
N/A	N/A	N/A	N/A	N/A

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

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	2023/04/11	> 0.5	µg/L	No
Arsenic	2023/04/11	> 1	µg/L	No
Barium	2023/04/11	14	µg/L	No
Boron	2023/04/11	> 2	µg/L	No
Cadmium	2023/04/11	> 0.1	µg/L	No
Chromium	2023/04/11	2	µg/L	No
*Lead	Refer to Summary Table Below			
Mercury	2023/04/11	> 0.1	µg/L	No
Selenium	2023/04/11	0.3	µg/L	No
Sodium	2021/04/07	16.0	mg/L	No
Uranium	2023/04/11	> 1	µg/L	No
Fluoride	2021/04/07	0.05	mg/L	No
Nitrite	2023/01/10	> 0.05	mg/L	No
	2023/04/04	> 0.05	mg/L	No
	2023/07/05	0.05	mg/L	No
	2023/10/03	> 0.05	mg/L	No
Nitrate	2023/01/10	> 0.05	mg/L	No
	2023/04/04	> 0.05	mg/L	No
	2023/07/05	0.09	mg/L	No
	2023/10/03	> 0.05	mg/L	No

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)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing	N/A	N/A	N/A
Distribution	1	0.1 – 0.1	0

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	2023/04/11	< 0.238	µg/L	No
Atrazine + N-dealkylated metabolites	2023/04/11	< 0.5	µg/L	No
Azinphos-methyl	2023/04/11	< 0.178	µg/L	No
Benzene	2023/04/11	< 0.1	µg/L	No
Benzo(a)pyrene	2023/04/11	< 0.01	µg/L	No
Bromoxynil	2023/04/11	< 0.1	µg/L	No
Carbaryl	2023/04/11	< 1	µg/L	No
Carbofuran	2023/04/11	< 2	µg/L	No
Carbon Tetrachloride	2023/04/11	< 0.2	µg/L	No
Chlorpyrifos	2023/04/11	< 0.178	µg/L	No
Diazinon	2023/04/11	< 0.178	µg/L	No
Dicamba	2023/04/11	< 0.2	µg/L	No
1,2-Dichlorobenzene	2023/04/11	< 0.2	µg/L	No
1,4-Dichlorobenzene	2023/04/11	< 0.3	µg/L	No
1,2-Dichloroethane	2023/04/11	< 0.2	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	2023/04/11	< 0.3	µg/L	No
Dichloromethane (methylene chloride)	2023/04/11	< 1	µg/L	No
2,4 Dichlorophenol	2023/04/11	< 0.2	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	2023/04/11	< 1	µg/L	No
Diclofop-methyl	2023/04/11	< 0.1	µg/L	No
Dimethoate	2023/04/11	< 0.178	µg/L	No
Diquat	2023/04/11	< 0.2	µg/L	No
Diuron	2023/04/11	< 7	µg/L	No
Glyphosate	2023/04/11	< 20	µg/L	No
Haloacetic acids (HAA)* (NOTE: show latest annual average)	2023/10/03 2023 Average	117.5 133.0	µg/L	Yes
Malathion	2023/04/11	< 0.178	µg/L	No
Metolachlor	2023/04/11	< 0.119	µg/L	No
Metribuzin	2023/04/11	< 0.119	µg/L	No
Monochlorobenzene	2023/04/11	< 0.5	µg/L	No
Paraquat	2023/04/11	< 0.2	µg/L	No
Pentachlorophenol	2023/04/11	< 0.3	µg/L	No
Phorate	2023/04/11	< 0.119	µg/L	No
Picloram	2023/04/11	< 0.2	µg/L	No
Polychlorinated Biphenyls(PCB)	2023/04/11	0.07	µg/L	No
Prometryne	2023/04/11	< 0.0595	µg/L	No
Simazine	2023/04/11	< 0.178	µg/L	No

THM – Herbert Avenue WTP (NOTE: show latest annual average)	2023/10/03 2023 Average	102.0 85.1	µg/L µg/L	No
Terbufos	2023/04/11	< 0.119	µg/L	No
Tetrachloroethylene	2023/04/11	< 0.3	µg/L	No
2,3,4,6-Tetrachlorophenol	2023/04/11	< 0.3	µg/L	No
Triallate	2023/04/11	2.06	µg/L	No
Trichloroethylene	2023/04/11	< 0.2	µg/L	No
2,4,6-Trichlorophenol	2023/04/11	< 0.2	µg/L	No
Trifluralin	2023/04/11	< 0.119	µg/L	No
Vinyl Chloride	2023/04/11	< 0.1	µg/L	No
MCPA	2023/04/11	< 5	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
2023 THM – Running Annual Average (RAA)	85.1	µg/L	N/A
2023 HAA – Running Annual Average (RAA)	133.0	µg/L	N/A
Sodium	16	Mg/L	2021/04/07
Benzo(a)pyrene - TW	< 0.01	ug/L	2023/04/11