



ANNUAL REPORT

<b>Drinking-Water System Number:</b>	<b>210000470</b>
<b>Drinking-Water System Name:</b>	Hastings Drinking Water System
<b>Drinking-Water System Owner:</b>	Municipality of Trent Hills
<b>Municipal Drinking Water Licence</b>	150-103
<b>Drinking Water Works Permit</b>	150-203
<b>Drinking-Water System Category:</b>	WT III, WD I
<b>Period being reported:</b>	January 1 to December 31, 2022

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p><b>Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [ X ]</b></p> <p><b>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ X] No [ ]</b></p> <p><b>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</b></p> <div style="border: 1px solid black; padding: 5px;"> <p>Trent Hills Municipal Office 66 Front Street South, Campbellford ON</p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p><b>Number of Designated Facilities served:</b></p> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> <p><b>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</b></p> <p><b>Number of Interested Authorities you report to:</b> <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div></p> <p><b>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</b></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:**

<b>Drinking Water System Name</b>	<b>Drinking Water System Number</b>
1. Hastings Drinking Water System	1. 210000470
2. Trentview Estates, Township of Asphodel-Norwood	2. 260057278

**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**

The Hastings water treatment plant is a conventional water treatment system, which draws all of its raw water supply from the Trent River. The treatment system consists of a low lift pumping station, two (2) solids contact up flow reactor-clarifiers, two (2) dual-media filters equipped with granular activated carbon for taste and odour control, a baffled contact tank connected to the filter discharge ensuring primary disinfection, a high lift pumping station equipped with secondary disinfection capabilities accomplished by a chlorine injection system located on the plant discharge. A corrosion inhibitor is injected into the plant discharge pipe for corrosion control in the distribution system.

A 530 cubic meter off-site storage standpipe provides peak hour demands and fire flow protection. The water distribution system is comprised of various water main materials of different sizes and a single pressure zone. The system supplies the Village of Hastings and the Trentview Estates water distribution system located in the Township of Asphodel-Norwood.

**List all water treatment chemicals used over this reporting period**

1. Poly Aluminum-chloride (SternPAC) - supplied by Kemira
2. Sodium Silicate (BW46M) - supplied by National Silicates
3. Gaseous Chlorine – supplied by Brenntag Canada

**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**

- Distribution system capital projects \$ 22,318.01
- Treatment chemicals \$ 46,129.32
- Equipment repairs \$ 14,250.26
- Contracted services \$ 11,955.82

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
N/A					

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	52	0-220	13-3,360	0	N/A
Treated	52	0-0	0-0	52	0-1
Distribution	156	0-0	0-0	58	0-3

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	8760	0.018-0.835 NTU
Chlorine	8760	0.81-3.04 mg/L
Fluoride (If the DWS provides fluoridation)	N/A	N/A

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

*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
Municipal Drinking Water Licence, Issued June 25th, 2021.	Total Suspended Solids	Samples collected monthly. Result = annual average concentration.	3.0	mg/L

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	10/01/2022	0.6<MDL	Micrograms	0
Arsenic	10/01/2022	0.2<MDL	Micrograms	0
Barium	10/01/2022	28.0	Micrograms	0
Boron	10/01/2022	8	Micrograms	0

<b>Cadmium</b>	10/01/2022	0.003<MDL	Micrograms	0
<b>Chromium</b>	10/01/2022	0.27	Micrograms	0
<b>*Lead</b>				
<b>Mercury</b>	10/01/2022	0.01<MDL	Micrograms	0
<b>Selenium</b>	10/01/2022	0.04<MDL	Micrograms	0
<b>Sodium</b>	10/01/2022	12.9	Milligrams	0
<b>Uranium</b>	10/01/2022	0.004	Micrograms	0
<b>Fluoride</b>	10/01/2022	0.06<MDL	Milligrams	0
<b>Nitrite</b>	14/11/2022	0.003<MDL	Milligrams	0
<b>Nitrate</b>	14/11/2022	0.028	Milligrams	0

\*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

### 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
<b>Plumbing</b>	N/A	N/A	N/A
<b>Distribution</b>	<b>8</b>	<b>0.01 – 4.42</b>	<b>0</b>

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
<b>Alachlor</b>	10/01/2022	0.02<MDL	Micrograms	0
<b>Atrazine + N-dealkylated metabolites</b>	10/01/2022	0.01<MDL	Micrograms	0
<b>Atrazine</b>	10/01/2022	0.01<MDL	Micrograms	0
<b>Desethyl atrazine</b>	10/01/2022	0.01<MDL	Micrograms	0
<b>Azinphos-methyl</b>	10/01/2022	0.05<MDL	Micrograms	0
<b>Benzene</b>	10/01/2022	0.32<MDL	Micrograms	0
<b>Benzo(a)pyrene</b>	10/01/2022	0.004<MDL	Micrograms	0
<b>Bromoxynil</b>	10/01/2022	0.33<MDL	Micrograms	0
<b>Carbaryl</b>	10/01/2022	0.05<MDL	Micrograms	0
<b>Carbofuran</b>	10/01/2022	0.01<MDL	Micrograms	0
<b>Carbon Tetrachloride</b>	10/01/2022	0.17<MDL	Micrograms	0
<b>Chlorpyrifos</b>	10/01/2022	0.02<MDL	Micrograms	0
<b>Diazinon</b>	10/01/2022	0.02<MDL	Micrograms	0
<b>Dicamba</b>	10/01/2022	0.20<MDL	Micrograms	0
<b>1,2-Dichlorobenzene</b>	10/01/2022	0.41<MDL	Micrograms	0
<b>1,4-Dichlorobenzene</b>	10/01/2022	0.36<MDL	Micrograms	0
<b>1,2-Dichloroethane</b>	10/01/2022	0.35<MDL	Micrograms	0
<b>1,1-Dichloroethylene(vinylidene chloride)</b>	10/01/2022	0.33 <MDL	Micrograms	0
<b>Dichloromethane</b>	10/01/2022	0.35<MDL	Micrograms	0
<b>2-4 Dichlorophenol</b>	10/01/2022	0.15<MDL	Micrograms	0
<b>2,4-Dichlorophenoxy acetic acid (2,4-D)</b>	10/01/2022	0.19<MDL	Micrograms	0
<b>Diclofop-methyl</b>	10/01/2022	0.40<MDL	Micrograms	0
<b>Dimethoate</b>	10/01/2022	0.06<MDL	Micrograms	0
<b>Diquat</b>	10/01/2022	1<MDL	Micrograms	0

<b>Diuron</b>	10/01/2022	0.03<MDL	Micrograms	0
<b>Glyphosate</b>	10/01/2022	1<MDL	Micrograms	0
<b>Malathion</b>	10/01/2022	0.02<MDL	Micrograms	0
<b>MCPA</b>	10/01/2022	0.00012<MDL	Milligrams	0
<b>Metolachlor</b>	10/01/2022	0.01<MDL	Micrograms	0
<b>Metribuzin</b>	10/01/2022	0.02<MDL	Micrograms	0
<b>Monochlorobenzene</b>	10/01/2022	0.30<MDL	Micrograms	0
<b>Paraquat</b>	10/01/2022	1<MDL	Micrograms	0
<b>Pentachlorophenol</b>	10/01/2022	0.15<MDL	Micrograms	0
<b>Phorate</b>	10/01/2022	0.01<MDL	Micrograms	0
<b>Picloram</b>	10/01/2022	1<MDL	Micrograms	0
<b>Polychlorinated Biphenyls(PCB)</b>	10/01/2022	0.04<MDL	Micrograms	0
<b>Prometryne</b>	10/01/2022	0.03<MDL	Micrograms	0
<b>Simazine</b>	10/01/2022	0.01<MDL	Micrograms	0
<b>THM (NOTE: show latest annual average)</b>		78.75	Micrograms	0
<b>Terbufos</b>	10/01/2022	0.01<MDL	Micrograms	0
<b>Tetrachloroethylene</b>	10/01/2022	0.35<MDL	Micrograms	0
<b>2,3,4,6-Tetrachlorophenol</b>	10/01/2022	0.20<MDL	Micrograms	0
<b>Triallate</b>	10/01/2022	0.01<MDL	Micrograms	0
<b>Trichloroethylene</b>	10/01/2022	0.44<MDL	Micrograms	0
<b>2,4,6-Trichlorophenol</b>	10/01/2022	0.25<MDL	Micrograms	0
<b>Trifluralin</b>	10/01/2022	0.02<MDL	Micrograms	0
<b>Vinyl Chloride</b>	10/01/2022	0.17<MDL	Micrograms	0

**List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.**

<b>Parameter</b>	<b>Result Value</b>	<b>Unit of Measure</b>	<b>Date of Sample</b>
<b>Sodium</b>	<b>12.9</b>	<b>mg/L</b>	<b>10/01/2022</b>
<b>THM</b>	<b>78.75</b>	<b>ug/L</b>	<b>RAA</b>