



SECTION 11 ANNUAL REPORT

Drinking-Water System Number:	220000479
Drinking-Water System Name:	Norwood Drinking Water System
Drinking-Water System Owner:	The Corporation of the Township of Asphodel-Norwood
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2022 to December 31, 2022

<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> <table border="1" style="width: 100%;"> <tr> <td>Public access/notice via the web</td> </tr> <tr> <td>Public access/notice via Government Office</td> </tr> </table>	Public access/notice via the web	Public access/notice via Government Office	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input style="width: 100px; height: 20px;" type="text"/></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: <input style="width: 100px; text-align: center;" type="text" value="NONE"/></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>
Public access/notice via the web			
Public access/notice via Government Office			

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
NONE	

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



A groundwater well supply system consisting of 4 wells with sodium hypochlorite disinfection. The facility has on-line, alarmed, continuous monitoring for treated water free chlorine residual, treated water turbidity and distribution water free chlorine residual. An orthophosphate blend is added as a corrosion control measure

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite – 12%, Aquapure 3601 Orthophosphate blend.

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

- Water meter Replacement program (con't) – \$54,650 (2021/2022)
- Distribution System Capital Upgrades – \$ 154,670
- Chlorine Pumps/Panel Upgrades – \$17,000
- New SCADA Computer - \$9000

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
2022/08/25	Sodium	36.0	mg/l	Re-sample and Public Notification	2022/09/08
2022/09/30	Total Coliform. Ecoli	8 tc / 5 ec	Cfu/100ml	Re-sample upstream and at location	2022/10/01

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 – Well 1	52	0 - 0	0 - 0	Not Required	
Raw – Well 2	52	0 - 0	0 - 0	Not Required	
Raw – Well 3	47	0 - 0	0 - 1	Not Required	
Raw – Well 4	52	0 - 0	0 - 0	Not Required	
Treated	52	0 - 0	0 - 0	52	0 - 1
Distribution	147	0 - 5	0 - 8	147	0 - 1620

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Samples	Range of Results (min #)-(max #)	Unit of Measure
Turbidity, Raw Well 1	12	0.17– 0.33	NTU
Turbidity, Raw Well 2	12	0.19 – 0.32	NTU
Turbidity, Raw Well 3	11	0.21 – 0.34	NTU
Turbidity, Raw Well 4	12	0.18 – 0.79	NTU
Turbidity, Treated	8760	0.00 – 1.0	NTU
Chlorine, Treated Pre Tower	8760	0.0 - 3.0	mg/L
Chlorine, Treated Pre Tower	122	1.34 – 2.0	mg/L
Chlorine, Treated Post Tower	8760	0.0 – 2.99	mg/L
Chlorine, Treated Post Tower	123	0.99 – 1.59	mg/L
Chlorine, Distribution	8760	0.00 – 1.99	mg/L
Chlorine, Distribution	242	0.63 – 1.46	mg/L
Fluoride (If the DWS provides fluoridation)	n/a	n/a	n/a
Phosphorus	28	0.12 - 1.78	mg/L

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

*Instrument spikes and dips recorded by on-line instrumentation were a result of various maintenance and calibration activities. Power interruptions may also cause an instrument reading to drop to zero. All events are reviewed for compliance with O. Reg. 170/03 and if warranted, are reported to the Ministry of Environment as Adverse Water Quality Incidents.

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
DWWP 133-201. Apr. 21, 2017	Phosphorus	Jan 1, 2022 to Dec. 31, 2022	0.12-1.78	Mg/l

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

Parameter	Sample Date	Sample Result	Exceedance
Antimony: Sb (ug/L) - TW	2022/03/08	<0.06	No
Arsenic: As (ug/L) - TW	2022/03/08	<0.20	No
Barium: Ba (ug/L) - TW	2022/03/08	167	No
Boron: B (ug/L) - TW	2022/03/08	20	No
Cadmium: Cd (ug/L) - TW	2022/03/08	0.008	No
Chromium: Cr (ug/L) - TW	2022/03/08	0.24	No
Lead: Pb (ug/L) - DW	2022/03/01	0.06	No
Mercury: Hg (ug/L) - TW	2022/03/08	0.01	No
Selenium: Se (ug/L) - TW	2022/03/08	0.26	No
Sodium: Na (mg/L) - TW	2022/08/23	30.6	Yes
Uranium: U (ug/L) - TW	2022/03/08	0.145	No
Fluoride Residual: Mean (mg/L) - TW	2021/03/24	<0.060	No
Nitrite (mg/L) - TW	2022/01/04	< 0.003	No
Nitrite (mg/L) - TW	2022/04/12	< 0.003	No
Nitrite (mg/L) - TW	2022/07/05	< 0.003	No
Nitrite (mg/L) - TW	2022/10/11	< 0.003	No
Nitrate (mg/L) - TW	2022/01/04	3.51	No
Nitrate (mg/L) - TW	2022/04/12	3.90	No
Nitrate (mg/L) - TW	2022/07/05	4.80	No
Nitrate (mg/L) - TW	2022/10/11	4.34	No

Summary of lead testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Unit of Measure	Number of Exceedances
Plumbing	NONE*			
Distribution	4	0.02 – 0.06	Pb (ug/L)	0

*This system is exempt from plumbing sampling for lead. This system must collect distribution pH and alkalinity samples under the reduced sampling table during each sampling period in every 12 month period and distribution lead samples under the reduced sampling table during each sampling period in every third 12-month period.

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

Parameter	Sample Date	Result Value	Exceedance
Alachlor (ug/L) - TW	2022/03/08	< 0.020	No
Atrazine (ug/L) - TW	2022/03/08	< 0.010	No
Atrazine + N-dealkylated metabolites (ug/L) – TW	2022/03/08	< 0.010	No
Azinphos-methyl (ug/L) - TW	2022/03/08	< 0.050	No
Benzene (ug/L) - TW	2022/03/08	< 0.32	No
Benzo(a)pyrene (ug/L) - TW	2022/03/08	< 0.0040	No
Bromoxynil (ug/L) - TW	2022/03/08	< 0.33	No
Carbaryl (ug/L) - TW	2022/03/08	< 0.05	No
Carbofuran (ug/L) - TW	2022/03/08	< 0.010	No
Carbon Tetrachloride (ug/L) - TW	2022/03/08	< 0.17	No
Chlorpyrifos (ug/L) - TW	2022/03/08	< 0.020	No
Diazinon (ug/L) - TW	2022/03/08	< 0.020	No
Dicamba (ug/L) - TW	2022/03/08	< 0.20	No
1,2-Dichlorobenzene (ug/L) - TW	2022/03/08	< 0.41	No
1,4-Dichlorobenzene (ug/L) - TW	2022/03/08	< 0.36	No
1,2-Dichloroethane (ug/L) - TW	2022/03/08	< 0.35	No
1,1-Dichloroethylene (ug/L) - TW	2022/03/08	< 0.33	No
Dichloromethane (ug/L) - TW	2022/03/08	< 0.35	No
2,4-Dichlorophenol (ug/L) - TW	2022/03/08	< 0.15	No
2,4-Dichlorophenoxy acetic acid (2,4-D (ug/L) -TW	2022/03/08	< 0.19	No
Diclofop-methyl (ug/L) - TW	2022/03/08	< 0.40	No
Dimethoate (ug/L) - TW	2022/03/08	< 0.030	No
Diquat (ug/L) - TW	2022/03/08	< 1.00	No
Diuron (ug/L) - TW	2022/03/08	< 0.030	No
Glyphosate (ug/L) - TW	2022/03/08	< 1.00	No
Malathion (ug/L) - TW	2022/03/08	< 0.020	No
Metolachlor (ug/L) - TW	2022/03/08	< 0.010	No
Metribuzin (ug/L) - TW	2022/03/08	< 0.020	No



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Monochlorobenzene (ug/L) - TW	2022/03/08	< 0.30	No
Paraquat (ug/L) - TW	2022/03/08	< 1.00	No
Parathion (ug/L) - TW	2022/03/08	< 0.020	No
Pentachlorophenol (ug/L) - TW	2022/03/08	< 0.15	No
Phorate (ug/L) - TW	2022/03/08	< 0.010	No
Picloram (ug/L) - TW	2022/03/08	< 1.0	No
Polychlorinated Bichenysl(PCB) (ug/L) - TW	2022/03/08	< 0.040	No
Prometryne (ug/L) - TW	2022/03/08	< 0.030	No
Simazine (ug/L) - TW	2022/03/08	< 0.010	No
*THM (ug/L) - DW	2022/10/11	24	No
Terbufos (ug/L) - TW	2022/03/08	< 0.010	No
Tetrachloroethylene (ug/L) - TW	2022/03/08	< 0.35	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2022/03/08	< 0.20	No
Triallate (ug/L) - TW	2022/03/08	< 0.010	No
Trichloroethylene (ug/L) - TW	2022/03/08	< 0.44	No
	2022/03/08		
2,4,6-Trichlorophenol (ug/L) - TW	2022/03/08	< 0.25	No
Trifluralin (ug/L) - TW	2022/03/08	< 0.020	No
Vinyl Chloride (ug/L) - TW	2022/03/08	< 0.17	No
MCPA (mg/L) - TW	2022/03/08	< 0.00012	No

*THM Results are shown as the highest of the 4 quarters.

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
None			