



Drinking-Water System Number:	260003149
Drinking-Water System Name:	Welland Distribution System
Drinking-Water System Owner:	Corporation of the City of Welland
Drinking-Water System Category:	Large Municipal
Period being reported:	January 1, 2021 to December 31, 2021

<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 [X] No []</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;"> <p>Civic Square 60 East Main Street, Welland, Ontario</p> <p>Municipal Service Centre 99 Federal Road, Welland, Ontario</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input type="text"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [x] No []</p> <p>Number of Interested Authorities you report to: <input type="text"/></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
Thorold (South End of Thorold) Distribution System	260049582
Highlands Residents Association	260093522

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 [X] 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



- 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 City of Welland purchases its water from the Regional Municipality of Niagara. Water supplied to the water distribution system in the City of Welland, is treated at the Welland Water Treatment Plant, located at 4 Cross Street. The source of water for this plant is 'surface water' from Lake Erie, via the Welland Canal and the Welland Recreational Waterway (Old Welland canal). The Welland Water Treatment Plant is a conventional water treatment plant which incorporates zebra mussel control, traveling screens, coagulation, flocculation, sedimentation, filtration, and disinfection in its process with the ability to go to direct filtration when raw water conditions permit. The Welland Water treatment plant provides water to the City of Welland, Town of Pelham, and part of the City of Thorold as well as The Highlands Residents Association Private Development off of Daimler Parkway. Treated water from the Welland Water Treatment Plant is distributed to Welland residents through approximately 270kilometers of City, and 30.5 kilometers of Regional water main, which range in size from 50mm (2 inch) to 750mm (30inch).

List all water treatment chemicals used over this reporting period

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

Approximately \$2,222,538 was spent on watermain capital projects and \$234,107 on repairs

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
January 14, 2021	Low chlorine	0.03	Mg/L	Take immediate bacteriological sample upstream and flush to restore secondary disinfection	January 14, 2021
February 2, 2021	Total Coliforms	1	/100ml	Flush and sample per Niagara Health instruction	February 3, 2021

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					
Treated					
Distribution	1408	0-0	0-1	1408	0->300

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	<i>NOTE: For continuous monitors use 8760 as the number of samples.</i>
Turbidity	5229	0-24	NTU	
Chlorine	5242	0.03-1.28	Mg/L	
Fluoride (If the DWS provides fluoridation)	N/A			

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

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				
Arsenic				
Barium				
Boron				
Cadmium				
Chromium				
*Lead				
Mercury				
Selenium				
Sodium				
Uranium				
Fluoride				
Nitrite				
Nitrate				

*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 #)	Unit of Measure	Number of Exceedances
Plumbing				
Distribution	0 –received regulatory relief			

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				
Aldicarb				
Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				



Bendiocarb				
Benzene				
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride				
Chlordane (Total)				
Chlorpyrifos				
Cyanazine				
Diazinon				
Dicamba				
1,2-Dichlorobenzene				
1,4-Dichlorobenzene				
Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane				
1,1-Dichloroethylene (vinylidene chloride)				
Dichloromethane				
2-4 Dichlorophenol				
2,4-Dichlorophenoxy acetic acid (2,4-D)				
Diclofop-methyl				
Dimethoate				
Dinoseb				
Diquat				
Diuron				
Glyphosate				
HAA	Avg.	0.0081	mg/l	
Heptachlor + Heptachlor Epoxide				
Lindane (Total)				
Malathion				
Methoxychlor				
Metolachlor				
Metribuzin				
Monochlorobenzene				
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls(PCB)				
Prometryne				
Simazine				



THM (NOTE: show latest annual average)	Avg.	0.0345	mg/l	
Temephos				
Terbufos				
Tetrachloroethylene				
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene				
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				
Trifluralin				
Vinyl Chloride				

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