



2024

Halton Region Drinking Water Quality Report: Acton Drinking Water Subsystem

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Introduction

Halton is committed to providing safe drinking water to all of our customers. As mandated by the Safe Drinking Water Act, 2002, this annual Water Quality Report includes:

- A description of the water treatment process and chemicals used;
- Any major expenses to install, repair or upgrade equipment in the system; and,
- The results of our water tests and how they compare to provincial regulatory standards.

All provincial regulatory monitoring requirements and actions applicable to Halton Region's operation of this system were met or surpassed in the current reporting year.

System Description

The Acton Drinking Water System draws water from three well fields. There are two wells in each of the Davidson well field, the Fourth Line well field and the Prospect Park well field. All of the wells use ultraviolet (UV) light for primary disinfection, additionally chlorine (chlorination) is used for secondary disinfection and control of iron and manganese. Hydrofluosilicic acid (fluoridation) is added to the water from all three sources. Both the Davidson and Fourth Line well fields use preliminary and final cartridge filters which contribute to log removal/inactivation credits for some pathogens.

The Prospect Park facility is equipped with greensand filters for the removal of manganese and iron from the water. Treated water from the three sites is pumped to the Churchill Reservoir and the Acton water distribution system. The Acton Drinking Water System is controlled through a Supervisory Control and Data Acquisition (SCADA) system that is monitored twenty-four hours per day, seven days per week.

What Improvements Are We Making?

Approximately \$252,000 was spent on an ultraviolet disinfection system upgrade project at the Prospect Park Water Treatment Plant. Additionally, \$61,000 was spent on watermain projects in Acton. Halton continued to support the production of quality drinking water through increased sampling for groundwater monitoring, the implementation of the source water protection plan (including capture zone and groundwater vulnerability assessments), upgrades to the SCADA monitoring and infrastructure management systems and water efficiency programs. Work also continued on the Drinking Water Quality Management System, a provincial requirement to support the licensing of municipal drinking water systems which came into effect for Halton in January 2009.

Partnership for Safe Water Program

Halton Region is actively involved in the American Water Works Association's Partnership for Safe Water, an alliance of prestigious drinking water organizations with a mission of improving the quality of drinking water delivered to customers. The Partnership's comprehensive programs have provided the Region with the tools needed to continuously improve performance beyond regulatory requirements.

Water Quality Testing

A large number of water quality tests are performed every day, in accordance with the *Safe Drinking Water Act, 2002 and* regulations. The following sections provide a summary of the test results.

Terms

CFU/100 mL	Colony-forming units per 100 millilitres of water
µg/L	micrograms per litre
mg/L	milligrams per litre
Standard	Ontario Drinking Water Quality Standard, O.Reg. 169/03

Microbiological Testing

	Number of Samples	E. coli Results (min-max)	Total Coliform Results (min-max)	Number of HPC Samples	HPC Results (min-max)
Raw	598	0 – 1	0 – 35	N/A	N/A
Treated	311	0 – Absent	0 – Absent	159	0 – 58
Distribution	367	Absent – Absent	Absent – Absent	294	0 - 6

Microbiological standards for treated and distributed water:

E.coli	not detected
Total Coliforms	not detected
HPC	Heterotrophic Plate Counts are conducted on some distribution system samples. The HPC test is used as a tool to monitor overall quality, but the results are not indicators of water safety. There is no Drinking Water Quality Standard for HPC.

Operational Testing

In the Acton Drinking Water System, continuous analyzers measure and record the results of chlorine residual, turbidity and fluoride residual in treated water. All of the readings are validated by an operator and are also reviewed by the Ministry of the Environment, Conservation and Parks (MECP) Inspector. As well, Halton operators measure the chlorine in the distributed water. 'Adverse' test results must be reported if the free chlorine residual at the end of the treatment process is not sufficient to achieve primary inactivation (disinfection) if a free chlorine residual in the distribution system is <0.05 mg/L or if the fluoride residual is >1.5 mg/L. In the current reporting year, all of the validated readings and test results for these parameters were within the ranges required by regulation.

Chemical Testing

Inorganic Parameters

Parameter	Sample Date	Result Value	Unit of Measure	Standard	Exceedance of Standard
Antimony	04/22/24	<0.0005	mg/L	0.006	No
Arsenic	04/22/24	<0.001	mg/L	0.01	No
Barium	04/22/24	0.171	mg/L	1.0	No
Boron	04/22/24	0.019	mg/L	5.0	No
Cadmium	04/22/24	<0.0005	mg/L	0.005	No
Chromium	04/22/24	0.001	mg/L	0.05	No
Mercury	04/22/24	<0.00005	mg/L	0.001	No
Selenium	04/22/24	<0.001	mg/L	0.05	No
Sodium	11/11/24	54.4	mg/L	20	Yes – Reported February 2022
Uranium	04/22/24	<0.001	mg/L	0.02	No
Fluoride	12/16/24	0.63	mg/L	1.5	No
Nitrite	11/13/23	<0.01	mg/L	1.0	No
Nitrate	11/13/23	0.33	mg/L	10.0	No

Organic Parameters

Parameter	Sample Date	Result Value	Unit of Measure	Standard	Exceedance of Standard
Alachlor	04/22/24	<0.50	µg/L	5	No
Atrazine + N-dealkylated metabolites	04/22/24	<1.0	µg/L	5	No
Azinphos-methyl	04/22/24	<2.0	µg/L	20	No
Benzene	04/22/24	<0.10	µg/L	1	No
Benzo(a)pyrene	04/22/24	<0.0050	µg/L	0.01	No
Bromoxynil	04/22/24	<0.50	µg/L	5	No
Carbaryl	04/22/24	<5.0	µg/L	90	No
Carbofuran	04/22/24	<5.0	µg/L	90	No
Carbon Tetrachloride	04/22/24	<0.10	µg/L	2	No
Chlorpyrifos	04/22/24	<1.0	µg/L	90	No
Diazinon	04/22/24	<1.0	µg/L	20	No
Dicamba	04/22/24	<1.0	µg/L	120	No
1,2-Dichlorobenzene	04/22/24	<0.20	µg/L	200	No
1,4-Dichlorobenzene	04/22/24	<0.20	µg/L	5	No
1,2-Dichloroethane	04/22/24	<0.20	µg/L	5	No
1,1-Dichloroethylene (vinylidene chloride)	04/22/24	<0.10	µg/L	14	No
Dichloromethane	04/22/24	<0.50	µg/L	50	No
2-4 Dichlorophenol	04/22/24	<0.25	µg/L	900	No
2,4-Dichlorophenoxy acetic acid (2,4- D)	04/22/24	<1.0	µg/L	100	No
Diclofop-methyl	04/22/24	<0.90	µg/L	9	No
Dimethoate	04/22/24	<2.5	µg/L	20	No
Diquat	04/22/24	<7.0	µg/L	70	No
Diuron	04/22/24	<10	µg/L	150	No
Glyphosate	04/22/24	<10	µg/L	280	No
HAA (latest running annual average)	11/04/24	14.8	µg/L	80 (running annual average)	No

2-Methyl-4-chlorophenoxyacetic acid	04/22/24	<10	µg/L	100	No
Malathion	04/22/24	<5.0	µg/L	190	No
Metolachlor	04/22/24	<0.50	µg/L	50	No
Metribuzin	04/22/24	<5.0	µg/L	80	No
Monochlorobenzene	04/22/24	<0.10	µg/L	80	No
Paraquat	04/22/24	<1.0	µg/L	10	No
Pentachlorophenol	04/22/24	<0.50	µg/L	60	No
Phorate	04/22/24	<0.50	µg/L	2	No
Picloram	04/22/24	<5.0	µg/L	190	No
Polychlorinated Biphenyls (PCB)	04/22/24	<0.05	µg/L	3	No
Prometryne	04/22/24	<0.25	µg/L	1	No
Simazine	04/22/24	<1.0	µg/L	10	No
THM (latest running annual average)	11/04/24	38.2	µg/L	100 (running annual average)	No
Terbufos	04/22/24	<0.50	µg/L	1	No
Tetrachloroethylene	04/22/24	<0.10	µg/L	10	No
2,3,4,6-Tetrachlorophenol	04/22/24	<0.50	µg/L	100	No
Triallate	04/22/24	<1.0	µg/L	230	No
Trichloroethylene	04/22/24	<0.10	µg/L	5	No
2,4,6-Trichlorophenol	04/22/24	<0.50	µg/L	5	No
Trifluralin	04/22/24	<1.0	µg/L	45	No
Vinyl Chloride	04/22/24	<0.20	µg/L	1	No

No additional testing was required by a Municipal Drinking Water License, order or other legal instrument.

‘Adverse’ Results Notifications

Notices of ‘adverse’ water quality results are submitted in accordance with the Safe Drinking Water Act, 2002 to the MECP and the Medical Officer of Health. In the current reporting year, there were no adverse water reports for the Acton Drinking Water System.

Community-Wide Lead Sampling Program Results

Under the Community-Wide Lead Sampling Program, samples were collected from eight points located throughout the Acton Drinking Water System in the current reporting year. None of the samples contained concentrations of lead above the standard of 10 µg/L.

More Information or Questions

The related annual Drinking Water Systems Flow Report is presented to Municipal Council members on or before March 31 of each year and is posted on halton.ca

For alternative formats or questions relating to these documents, email accesshalton@halton.ca or call 311.

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