

2021 Annual Drinking Water Quality Report

Introduction

This Annual Drinking Water Quality Report for the calendar year 2021 is designed to inform you about your drinking water quality. The Regional Municipality of Durham's 2021 Drinking Water Quality Report is submitted to satisfy the requirement of Section 11 of Ontario Regulation (O. Reg.) 170/03 under the Safe Drinking Water Act. As the owner of the drinking water systems, the Region must prepare an annual report for each system that includes the following five areas of information:

- A brief description of the drinking water system;
- A list of water treatment chemicals used;
- A summary of the test results covered under the reporting period;
- A summary of adverse test results and other issues, including corrective actions taken;
- A description of major expenses incurred to install, repair or replace equipment.

The Regional Municipality of Durham owns and operates fourteen (14) drinking water systems, thirteen (13) of which are covered by this report. The drinking water system supplying water to the Uxbridge Industrial Park (Uxville) is not covered by this report as it is regulated by the Ministry of Health and Long Term Care, O. Reg. 319/08. The Sun Valley Cooperative Drinking Water Supply System is a privately owned non-municipal year-round residential system however, operated by the Region.

Water for the Region's municipal water supply systems comes from three sources: Lake Ontario, Lake Simcoe and groundwater wells. The Region is responsible for operating and maintaining every component of the water supply system; treatment, storage and distribution of potable water to consumers in Ajax, Pickering, Oshawa, Courtice, Whitby, Brooklin, Bowmanville, Newcastle, Newtonville, Orono, Blackstock, Port Perry, Uxbridge, Greenbank, Sunderland, Cannington and Beaverton.

The Region operates and maintains the following infrastructure assets:

- 6 surface water supply plants,
- 10 water pumping stations,
- 13 water storage facilities,
- 8 combined water pumping station/water storage facilities
- 24 groundwater wells, and
- 2,631 km of watermains.

The water pumping stations and water storage facilities are located throughout the distribution systems to provide pressure and meet water demands. There must be adequate pressure and water storage throughout the system to meet peak water consumption demands, as well as extraordinary demands, such as fire emergencies.

Drinking Water Quality

Drinking water quality is monitored extensively at each stage of the water treatment and distribution process. In-plant samples are collected and tested on site throughout the day by certified operators, while on-line analyzers continuously monitor chlorine residual, turbidity and other quality-related parameters. In addition to on-site quality monitoring, the Region collects and tests samples for bacteriological, inorganic and organic parameters, as required by O. Reg. 170/03. These samples are analyzed at the York-Durham Regional Environmental Laboratory in Pickering. The laboratory is accredited by the Canadian Association for Laboratory Accreditation and licenced by the Ministry of the Environment, Conservation and Parks (MECP).

Monitoring the bacteriological quality of water is imperative as the presence of disease-causing bacteria, protozoa and viruses in drinking water can be a significant threat to public health. Bacteriological quality is routinely monitored, with samples being collected at three (3) stages of the drinking water system; the raw water entering the drinking water system, the treated water leaving the system and the treated water in the distribution system. Inorganic and organic parameters can be naturally occurring in the environment or be present as a result of anthropogenic activities. Organic parameters are present as a result of industrial and municipal waste, urban and agricultural runoff, and the natural decomposition of biological matter.

Bacteriological, inorganic and organic parameters must not exceed their standard, as listed in the Ontario Drinking Water Quality Standards, O. Reg. 169/03, under the Safe Drinking Water Act. All inorganic and organic results listed in this report are from treated water samples.

Drinking Water Quality Management Standard

All of the Region's drinking water systems are accredited to the MECP Drinking Water Quality Management Standard (DWQMS). DWQMS has been developed to integrate quality management into the operation of all municipal drinking water systems in Ontario. DWQMS specifies the minimum requirements for a quality management system in an effort to protect the health of individuals who consume Ontario's drinking water.

The Municipal Drinking Water Licencing Program has five components:

- drinking water works permit;
- accepted operational plan, which includes a quality management system that meets the requirements of Ontario's DWQMS;
- accredited operating authority;
- approved financial plan; and
- permit to take water.

Copies of this report can be found on the [Region's Website](http://www.durham.ca) at www.durham.ca. For more information on the licencing program visit the [MECP Ontario Drinking Water website](http://www.ontario.ca/ministry-environment) at: <http://www.ontario.ca/ministry-environment>.

If this information is required in an accessible format, please contact 1-800-372-1102 extension 3488.