

Water Department

2003 Quarterly Report

APRIL - JUNE

The Corporation of the Municipality of Port Hope's Water Department is pleased to present to its citizens our Quarterly Report. Ontario's Drinking Water Protection Regulation (reg. 459/00) requires that we publish this report for your information. This report can be obtained from the Water Treatment Plant, The Public Works Office and at the Municipality of Port Hope's Administrative Office or by viewing it on our website at www.porthope.ca, click on the Waterworks menu. Here you will find the water quality data and other information that we are required to collect for the period of April 1/03 through June 30/03.

Our Compliance Report is available for viewing by the public. This report includes information from January 1, 2002 to December 31, 2002. This report may be viewed at the Water Treatment Plant, The Public Works Office and at the Municipality of Port Hope's Administrative Office and will include information such as:

- I)** Details of non-compliance and how and when it was corrected
- II)** A summary of the water supplied compared to the rated capacity specified in our Certificate of Approval, including monthly average and maximum daily flows
- III)** Summary of records related to flow rate exceedances, and a summary of analytical results as stated in our Certificate of Approval
- IV)** A summary of chemical usage, average dosage rates and any abnormal usages
- V)** A statement of compliance required by our Certificate of Approval and a detailed description of the measures taken to ensure compliance.

We are part of the Public Works Department for the Municipality of Port Hope, their office is located at 43 Augusta St. in Port Hope.

Please direct all billing inquiries by visiting or phoning the Finance Department. The Finance Department is located on the main floor of the Municipalities administrative hall at 56 Queen St. in Port Hope; their phone number is (905) 885-4544.

If you have a question about the water distribution system in the community of Port Hope please contact the Public Works Department at 885-2431 or the Water Distribution Superintendent at 885-7461.

If you have a question about this report or your water quality please call our Treatment Plant at 885-2209 to speak with the Operator on duty or the Water Treatment Supervisor.

All of our Treatment Plant and Distribution system Operators are licensed by the Ministry of the Environment and are members of the Ontario Waterworks Association, a section of the American Waterworks Association.

Our Water Treatment Plant is located on Marsh St. at the intersection of Choate St. (west of Cameco Corp.).

The Port Hope Waterworks Commission was established in 1896 with the Commission being changed to the Water Department for the new Municipality of Port Hope and Hope on January 1, 2001. On August 9, 2001, the Town of Port Hope and Hope received approval from the Ministry of Municipal Affairs to change our name to The Corporation of the Municipality of Port Hope.

The first formal pumping station was built at the base of Smith St. Many changes over the years have improved water quality and distribution, from infiltration wells to slow sand filtration and finally with what we use today, dual media rapid sand filters.

Chlorine (pre chlorine) is used to disinfect the water as it enters our treatment process. Before we pump the water into the distribution system we add more chlorine (post chlorine) to aid us in maintaining a chlorine residual in the distribution system.

Before filtration we use aluminium sulphate as a coagulant (to help settle out suspended particulate matter). Aluminium sulphate attracts suspended particulate matter to it and creates a larger particle, this larger particle will then settle out in the settling chambers before it enters the Filters. Any particulate matter remaining is trapped in the filters.

We do not add Fluoride to the water, any Fluoride in the Treated Water is naturally occurring.

Because of the Towns hilly terrain, we have other pumping stations located on the West Side of the municipality. They are required to help maintain adequate pressure in the distribution system, they include a reservoir that can hold up to 500,000 gallons, a booster pumping station, and a standpipe that can hold up to 243,000 gallons.

Sampling your water

We comply with the Ministry of the Environment's Drinking Water Standards, objectives and guidelines for waterworks using a surface water source. Our Treatment Plant is capable of treating and pumping 4,400,000 imperial gallons per day to our 12,500 consumers.

Water quality is monitored extensively at each stage of the water treatment process in order for plant operators to make any necessary process changes. In-plant samples are collected and tested on site throughout the day by a licensed operator for physical and chemical parameters such as Chlorine residuals, Aluminium residuals, pH,

Sodium, Turbidity and Temperature. On-line analysers monitor the process on a continuous basis.

Raw, treated and distribution samples are collected weekly and sent to SGS Lakefield Research, these samples are analysed for microbiological and inorganic parameters.

Per Quarter we have more than 73 different parameters that we must sample for, they consist of Microbiological, Volatile Organics, Inorganics, Pesticides and PCB; these parameters are analysed by Lakefield Research Laboratories, which is an accredited laboratory.

The Provincial Ministry of the Environment Laboratory analyse samples submitted for Ontario's Drinking Water Surveillance Program, (DWSP). This sampling program was started in April of 1986 and samples for more than 180 different parameters on a twice yearly schedule. This program allows the Ministry of the Environment laboratory to analyse water samples from the system's raw and treated water, along with water from selected consumers. The results have shown the water supply in the Town of Port Hope to be of excellent quality.

Where your water comes from

Have you ever really thought about where your water comes from?

In Port Hope we are blessed with a supply of surface water of very good quality. Our raw water source is Lake Ontario, a large and clear body of water. The inlet for our intake pipe is located approximately two metres above the lake bed at a depth of nine metres, about 770 metres from shore south west of our Treatment Plant.

Because of the location and depth of the raw water intake the raw water quality seldom changes. This makes it easier for Water Treatment Staff to produce consistently safe water.

The outlet of the Ganaraska River will sometimes change raw water quality (spring run off) but this is something that our treatment plant and staff are designed and trained to handle. The discharge of the Town's WasteWater Treatment Plant is located near the east boarder of the Municipality, south of Cashway Lumber and does not influence our treatment plant.

Terms you need to know

Definitions

MAC

Maximum Acceptable Concentration. This is a health-related Ontario drinking water standard established for contaminants that have known or suspected adverse health effects when above a certain concentration. The length of time the MAC can be exceeded without injury to health will depend on the nature and concentration of the parameter.

IMAC

Interim Maximum Acceptable Concentration. This is a health-related Ontario drinking water standard established for contaminants when there are insufficient toxicological data to establish a MAC with reasonable certainty, or when it is not practical to establish a MAC with reasonable certainty, or when it is not practical to establish a MAC at the desired level.

Parameter

This is a substance that we sample and analyse for in the water.

mg/L

Milligrams per litre. This is a measure of the concentration of a parameter in water, sometimes called parts per million (ppm).

ug/L

micrograms per litre. This is a measure of the concentration of a parameter in water, and expressed in parts per billion (ppb).

AO (Aesthetic Objective)

AO's are established for parameters that may impair the taste, odour or colour of water or which may interfere with good water quality control practices. For certain parameters, both aesthetic objectives and health-related MACs have been derived.

OG (Operational Guidelines)

OG's are established for parameters that need to be controlled to ensure efficient and effective treatment and distribution of the water.

<MDL (Method Detectable Limit)

Indicates that the parameter being sampled for is in a quantity that is less than the lowest possible detectable limit for the analysis method used.

What is in your water?

Some parameters may be present in source water before we treat it. Here is a description of the various groups of parameters.

Microbiological parameters such as bacteria may come from sewage plants, livestock operation, septic systems and wildlife. Microbiological quality is the most important aspect of drinking water quality because of its association with dangerous water-borne diseases, which can strike quickly.

Inorganic parameters such as salts and metals can be naturally occurring or a result of urban storm runoff, industrial or domestic wastewater discharge, mining or agriculture. Some may be a result of treatment and distribution of water (for example, lead from old solder in pipes).

Organic parameters can be naturally occurring, but most organics of concern are synthetic. They originate from industrial discharges, urban storm runoff and other sources. Included in this group are pesticides that originate from both rural and urban areas.

Some may originate from treatment of drinking water (for example, chlorination by-products such as Trihalomethanes).

Our certificate of approval from the Ministry of the Environment sets monitoring requirements. The sample table results summarises all the detectable results from monitoring we were required to do for this quarter. The presence of these substances in drinking water does not necessarily mean that the water poses a health risk.

We are required to monitor only once a year for some parameters, so some of the data in the table could be several months old. They are still representative of the water quality.

Did we exceed the standards? No