



TOWN OF NIAGARA-ON-THE-LAKE

WATERWORKS' ANNUAL REPORT FOR CONSUMERS For the period April 1, 2003 through December 31, 2003

Submitted on: February 26, 2004

This report is published in print and posted on the Town's website (www.notl.com) on the internet in accordance with the requirements of Ontario Regulation 170/03 made under the Safe Drinking Water Act, 2002, effective May 17, 2003.

As of January 1st, 1970, the Town has operated within a two tier municipal government system. The upper tier municipality, the Regional Municipality of Niagara, supplies treated drinking water to the lower tier municipality, the Town of Niagara-on-the-Lake, which owns and operates the local water distribution system. Please visit the Regional Niagara website at www.regional.niagara.on.ca for the complementary report on the surface sources and treatment processes used to produce drinking water supplied to the Town.

Who to contact...

If you should have any questions regarding the Town's water distribution system, contact the Water and Sewer Supervisor, Mr. Larry Higgins, C.E.T. at 905-468-3278 during normal business hours. All of the water and sewer installers have at least Class I Water Distribution certification. The waterworks utility operates as a division of the Town's Public Works Department which reports through the Public Works Advisory Committee to Town Council. The Department Director is Mr. Ewald Kuczera, P.Eng. and Deputy Director is Mr. Nick Aragona, C.E.T. The Department has membership in the Ontario Water Works Association, a section of the American Water Works Association.

The Public Works Office and Yard are located directly behind the Town's Administration Building at 1593 Four Mile Creek Road in Virgil. Public access is off of Lorraine Street.

The Public Works Advisory Committee usually meets on the third Monday of every month at 7:00 p.m. in the Council Chambers, Administration Building. These meetings are open to the public.

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Where your water comes from...

The information contained in this report is relevant to consumers who draw water from domestic supply lines which are connected to the Town's water distribution system (excluding properties which are on private wells, cisterns or are otherwise connected to neighbouring local municipal systems i.e. Read Road). The Town's distribution system in Bevan Heights subdivision is connected to the City of Niagara Falls distribution system and is served by the Niagara Falls Water Treatment Plant. The balance of the Town's distribution system was supplied solely by the De Cew Water Treatment Plant up until 1998 when a new interconnection was made with the Niagara Falls system. At this point in time, both the De Cew and Niagara Falls Water Treatment Plants are able to supply water to the Town of Niagara-on-the-Lake.

Terms you need to know...

We suggest that you familiarize yourself with the following terms before reading the information below.

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 at the desired level.

Parameter

This is a substance that we sample and analyze 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).

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What is in your water...

Some parameters may be present in source water before it is treated by the Regional facilities. Here is a description of the various groups of parameters.

Microbiological parameters such as bacteria may come from sewage plants, livestock operations, 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 as a result of urban storm runoff, industrial or domestic wastewater discharge, mining or agriculture. Some may be a result of treatment or 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 byproducts such as trihalomethanes).

The Ministry of the Environment prescribes the monitoring requirements as published in the Ontario Drinking Water Standards. The full text can be found on the Ministry's web site at www.ene.gov.on.ca or contact the Ministry's Public Information Centre, toll-free at 1-800-565-4923. The table below summarizes all of the detectable results from monitoring that the Town was required to do on its distribution system for, April 1 to December 31 of 2003. The presence of these substances in drinking water does not necessarily mean that the water poses a health risk.

The Town of Niagara-on-the-Lake has contracted for the testing for microbiological parameters with E3 Laboratories, and for trihalomethanes and lead with Lakefield Research, both accredited laboratories. The following is a summary of results for the regular sampling activity undertaken by the Town:

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Microbiological Parameters	MAC or IMAC	Number of Samples	Number of Detectable Results	Sampling Dates (weekly)	Range	Exceedance	Comments
Total Coliforms (counts/100ml)	*	254	0	04/01-12/29	Not Applicable	No	Indicates <u>possible</u> presence of fecal matter.
Fecal coliforms (counts/100ml)	*	254	0	04/01-12/29	Not Applicable	No	Definite indicator of fecal contamination.
Background Colonies (counts/100ml)	200	254	12	04/01-12/29	1-121	No	Possible indicator of deteriorating water quality
E-Coli (counts/100ml)	*	191	0	08/26-12/29	Not Applicable	No	Definite indicator of fecal contamination
Microbiological Parameters	Presence or Absence	Number of Samples	Number of Detectable results	Sampling Dates (Weekly)	Range	Exceedance	Comments
E coli	Absence	209	0	04/01-08/19	Not Applicable	No	Definite indicator of fecal contamination

*Indicator of adverse water quality if detected in treated water.

Note: The information used to complete the above table was reported by E3 Laboratories.

Parameters Related to Microbiological Quality	MAC or IMAC	Number of Samples	Number of Detectable Results	Sampling Dates (weekly)	Range mg/l	Exceedance	Comments
Free Chlorine – System (mg/l)	-	463	463	04/01-12/29	0.05-1.24	No	Recommended level of at least 0.2 mg/l, not an adverse result unless less than 0.05mg/l

Field observations recorded by licensed operators

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Chemical Parameters	MAC mg/l	Number of Samples	Number of Detectable Results	Sampling Dates	Range mg/l	Exceedance	Typical Source of Contaminant
Trihalomethanes	0.1	3	3	04/29 07/15 11/11	0.021 - 0.028	No	Bi-product of chlorination

Note: The information used to complete the above table was reported by Lakefield Research. Annual lead testing results in Quarterly Report for the period January 1 to March 31, 2003.

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Did we exceed the standards...

None of the water samples taken for microbiological testing during the period of April 1, to December 31, 2003 exceeded MAC or IMAC levels. All samples taken had an acceptable level of free chlorine residual.

All samples for trihalomethanes and lead showed levels below the MAC in 2003.

Based on monitoring carried out in compliance with the Drinking Water Protection Regulation and the Ontario Drinking Water Standards, the drinking water supplied by the Town of Niagara on the Lake to its customers during the period of April 1 to December 31, 2003 was determined to be safe for consumption.

For your information...

- The Town's sampling effort for microbiological testing exceeds the minimum prescribed number of 21 per month.
- Although the recommended level of free chlorine in the distribution system is 0.2 mg/l, it is only when this level falls below 0.05 mg/l that the legislation considers this to be an indicator of adverse water quality.
- There were 16 breaks of the Town's water mains in 2003 all of which were repaired in accordance with accepted procedures.
- The Town annually replaces deficient portions of its existing water system. In 2003 the following watermain replacements were carried out:

	Length (meters)	<u>Cost</u>
East-West Line (Concession 3 to Concession 4 and west of Creek Road)	1400	\$246,417
Rye Street (Paffard Street to Flynn Street)	625	\$162,914
Nelles Street	150	\$17,927

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- If the water sometimes looks rusty or coloured, and it is only observed in your hot water, it may be caused by deterioration of the tank in your hot water heater. If the colour is also noticeable in your cold water, it may be coming from the water main. Various maintenance procedures in our distribution system (for example: fire hydrant and valve maintenance or repair of water main breaks) require flushing of the water mains. Approximately 12% of the Town's distribution system consists of cast iron water mains. There is a type of rust that forms on the inside walls of these cast iron mains over time. Higher than normal flow conditions, such as occurs during flushing operations, may cause small particles to break off adding colour to the water. This is usually a temporary phenomenon. Opening your taps long enough for the colour to disappear should be sufficient to flush out the service line from the main to your house and should take care of the situation. Please note that there is no health risk associated with this physical characteristic.

Free copies of this report are available at the Public Works Office at 1593 Four Mile Creek Road.