



## TOWN OF NIAGARA-ON-THE-LAKE

### WATERWORKS' ANNUAL REPORT FOR CONSUMERS For the period January 1, 2004 through December 31, 2004

Submitted on: February 25, 2005

*This report is published in print and posted on the Town's website ([www.notl.org](http://www.notl.org)) 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 1<sup>st</sup>, 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](http://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 system Overall Responsible Operator, 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 and on Concession 6 south of Highway 405 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](http://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, January 1 to December 31 of 2004. 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 SGS 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	Number of Exceedances	Comments
Total Coliforms (counts/100ml)	*	577	1	01/06-12/28	Not Applicable	1	Indicates possible presence of fecal matter.
Background Colonies (counts/100ml)	200	577	30	01/06-12/28	1- >200	4	Possible indicator of deteriorating water quality
E-Coli (counts/100ml)	*	577	0	01/06 – 12/28	Not Applicable	0	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	Number of Exceedances	Comments
Free Chlorine – System (mg/l)	-	577	577	01/06-12/28	0.04-1.92	1	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

Chemical Parameters	MAC	Number of Samples	Number of Detectable Results	Sampling Dates	Range mg/l	Number of Exceedances	Typical Source of Contaminant
Trihalomethanes (mg/l)	0.1	4	4	01/27 04/06 08/03 12/07	0.026- 0.042	0	Bi-product of chlorination
Lead (mg/l)	0.01	1	1	01/27	0.0022	0	Naturally occurring

Note: The information used to complete this table was reported by SGS Lakefield Research.

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also taken upstream and downstream. All these samples had acceptable results. The free chlorine residuals ranged from 0.27 mg/l to 0.60 mg/l. Notice of Issue Resolution was provided to the MOE and the MOH on December 7.

The quarterly samples for trihalomethanes and the annual sample for lead showed levels below the MAC in 2004.

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 January 1 to December 31, 2004 was determined to be safe for consumption.

**For your information...**

- The Town's practice of taking at least 40 samples per month for microbiology 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.
- 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 13.9% 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.

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**About the Niagara-on-the-Lake water system . . . . .**

- The Niagara-on-the-Lake Water Distribution System is a Class 2 facility.
- There are approximately 34 km of Regional transmission mains, 180 km of Town distribution mains and 1058 fire hydrants in the Niagara-on-the-Lake water system. There are 5400 customers in Niagara-on-the-Lake.
- The Town's treated water is produced by the Region. The bulk of this water is carried by Regional transmission mains into the Town along Glendale Avenue from the DeCew Water Treatment Plant and along Four Mile Creek Road from the Niagara Falls Water Treatment Plant. There are also two connections to the City of Niagara Falls' water distribution system, one on Stamford Townline Road for the Bevan Heights subdivision and along Concession 6 from Mewburn Road in Niagara Falls. Residents along Read Road have access to municipal water as customers of the City St. Catharines.
- In 2004, the Town purchased 2,924,880 cubic meters of treated water from the Region.
- There were 16 breaks of the Town's water mains in 2004 all of which were repaired in accordance with accepted procedures.
- The Town annually replaces deficient portions of its existing water system. In 2004 the following watermain replacements were completed:

	<u>Length (meters)</u>	<u>Cost</u>
Niagara Stone Road (Line 1 to Hunter Road)	2400	\$633,201
Line 6 Road (Concession 2 to Concession 3)	1050	\$137,720
Ricardo Street (King Street to Melville Street)	450	\$186,704

This report for 2004 was prepared by Larry Higgins and reviewed by Ewald Kuczera.

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

