



2009 ANNUAL COMPLIANCE REPORT  
ON DRINKING WATER QUALITY

Certificate of Approval No. 9008-7DHQFB  
Waterworks Identification No. 220000807

## **2009 ANNUAL SUMMARY REPORT FOR COUNCIL**

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## **2009 ANNUAL SUMMARY REPORT FOR COUNCIL**

Summary Reports for Municipalities, Schedule 22 of O.Reg. 170/03, has been prepared to assist Brighton's Municipal Council in understanding the capability and operation of the drinking water system and the quality of its water.

The report summarizes:

1. Brighton's Large Municipal Residential Drinking Water System
2. Ontario Drinking Water System Regulations
3. Requirements of the Regulations and System's Approvals
4. Upgrades Required to Correct Deficiencies
5. Brighton's Small Municipal Non-Residential Systems
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### **1. BRIGHTON'S MUNICIPAL DRINKING WATER SYSTEM**

#### ***1.1 Raw Water Source***

In 2009, water sources at the Brighton Well Supply consisted of three drilled wells. The only raw water source is groundwater which is captured from a deep aquifer by drilled wells located adjacent to the old Upper Reservoir site. There are three wells that draw water from the aquifer under the reservoir area: Well Nos. 1, 2 and 3 pumps work on rotation

The transition to a secure groundwater supply to meet O.Reg.170/03 and the Procedure for Disinfection of Drinking Water in Ontario included construction of the third well and a new storage facility. A fail safe control system has been installed to ensure that an upward hydraulic gradient is maintained at all times in the raw water supply aquifer. This system includes water level sensors in each observation and production well, an alarm system equipped with pre-determined set-points for well depth, and a SCADA data-log system. The work was completed and commissioned in October, 2005.

As part of Brighton's Turbidity Report-Action Plan and Implementation Schedule, mitigation measures included pumping to waste until turbidity levels were below 1.0 NTU.

## **1.2 Treatment Process**

Disinfection of water to eliminate disease causing organisms is the most important step in the water treatment process. In October 2005 our upgraded system came on-line which changed our system from an open surface water reservoir system to an enclosed concrete storage reservoir. This enables us to have more contact time for chlorination; which is done by injecting Chlorine gas into the water as it enters into one of two cells (*which is called Pre-Chlorination*). The concrete water storage reservoir is approximately 39 m x 58 m, and consists of two cells. Each cell is equipped with baffles and provides  $2800 \text{ m}^3 \times 2 = 5600 \text{ m}^3$  of water storage and equipped with overflow, drain system, piping and appurtenances, and a water main from the **Water Treatment Plant** (WTP) and reservoir to the existing distribution system (DS). A WTP building approximately 39 m x 10 m housing a primary and secondary disinfection system consisting of two (2) gas chlorinators, weigh scales, vacuum regulators, injectors and appurtenances to facilitate application of chlorine solution for pre-chlorination at a point where water enters either cell from the wells and also post-chlorination as water enters the DS. Instrumentation and controls including on-line chlorine residual analyzer and turbidity meters measure the chlorine residuals and turbidity in the reservoirs and the outlet to the DS. Emergency power is provided by an 80 kW pad mounted standby generator including automatic transfer switch. There is a drain/bypass line from the WTP and reservoirs to outfall through a bypass detention pond.

## **1.3 Distribution System**

The Municipality of Brighton's distribution system provides drinking water to approximately 6297 residents through a network of approximately 58 km of piping and 2,800 residential and commercial accounts, including Presqu'ile Park. Fire hydrants are maintained by the Water Department, which includes a flushing program to clean the mains and flush out dead-ends. This practice maintains the water quality in the distribution system and ensures the hydrants are in good repair. Chlorine residuals, as well as microbiological sampling and testing in the distribution system are checked on a weekly basis at least seven separate sites. Operators also test chlorine residuals on a daily basis in the distribution system as per O. Reg. 170/03.

Upgrades to the distribution system in 2009 included completion of the 2008 Richardson Street project, installation of new watermain and hydrants on Oliphant Street (complete with looping to remove two dead ends at this location), installation of new watermain and hydrants on Dufferin Street, and an extension on Young Street.

In 2009, there were 18 water leaks in the distribution system. Most of the water leaks were caused by worn flared connection fittings and worn copper services lines. There were 5 main line breaks in 2009 and 3 hydrant leaks. Additionally, there were 10 instances of hydrant tampering wherein unknown individuals opened hydrants during the night and let water flow onto the street until Water Department staff were dispatched to close the hydrants. These are believed to be youth pranks, and in each case police were notified.

### 1.4 Consumption and Charges to Consumers

Increasing monthly flows in the past number of years can be attributed to both weather patterns and an increased customer base. In 2009, a total of 982,445 m<sup>3</sup> of water was used. Based on a population of 6297 residents on the distribution system, the per capita consumption was 156.0 m<sup>3</sup>/ person/year or 0.427m<sup>3</sup> (431 Litres)/person/day. This equates to an average daily demand of 2,691.6 m<sup>3</sup>/day.

The average daily demand represents the average quantity of water treated at the water treatment plant. Peak day demand represents the highest volume of water treated over a single 24-hour period, usually the hottest day of the year or on a day with very high usage due to fire suppression. In 2009 the peak day demand occurred on May 18 with a recorded flow of 4,434 m<sup>3</sup>/day. This instance can be attributed to the aforementioned hydrant tampering, wherein it is believed that a hydrant was left flowing for approximately 6 hours at an estimated water usage of 1,105,500 litres.





In 2009, sales at the *Municipal Public Water Dispenser* totaled of 35 m<sup>3</sup>.

By-law Number 274-2004 enacts the rules and regulations for the installation, repair, maintenance, and access to the Water Distribution System and appurtenant water meters, sanitary and storm sewer services and related appurtenances; the billing and collection of charges for water and sewer usage; and the penalties for offences of the water and sewer works in the Municipality of Brighton.

As part of the Municipality of Brighton’s water conservation policy, the Water Conservation By-law No. 029-2001, is enforced annually from June 1<sup>st</sup> to September 15<sup>th</sup>. This by-law is maintained to regulate and restrict the unnecessary use of water for outdoor purposes within the serviced area. Staff monitor and enforce compliance to this by-law during the period with which it is in effect.

**Water costs money... don't waste it!**  
 A dripping faucet or fixture can waste 3 gallons a day...a total of 1095 gallons a year.

**Conserve Water and Save Money!**  
 A reminder from your local water utility where we're dedicated to quality and service.

Waste per quarter at 60 psi water pressure			
Diameter of stream	Gallons	Cubic Feet	Cubic Meters
 1/4"	1,181,500	158,000	4,475
 3/16"	666,000	89,031	2,521
 1/8"	296,000	39,400	1,115
 1/16"	74,000	9,850	280

▲ A continuous leak from a hole this size would, over a three month period, waste water in the amounts shown above.

Table I

Water Consumption Flows (m<sup>3</sup>)

	<b>2009</b>	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>
<b>January</b>	75,560	72,685	58,718	82,272	70,952	71,970	78,265
<b>February</b>	65,591	72,548	56,628	69,405	71,484	68,580	70,877
<b>March</b>	75,067	69,936	63,579	76,039	69,759	79,259	75,369
<b>April</b>	78,919	72,738	65,329	72,884	61,223	72,723	70,619
<b>May</b>	94,465	82,706	89,653	86,572	69,198	79,911	80,476
<b>June</b>	94,392	94,990	105,967	89,064	89,504	89,335	86,909
<b>July</b>	99,835	92,364	99,390	85,591	91,527	87,648	98,759
<b>August</b>	101,839	86,357	107,735	93,161	89,244	86,528	96,356
<b>September</b>	88,957	83,154	96,781	68,548	82,643	78,125	90,002
<b>October</b>	70,873	74,101	79,923	65,398	81,680	76,815	75,261
<b>November</b>	66,742	71,396	70,758	63,636	80,713	74,115	72,510
<b>December</b>	70,205	74,067	74,357	59,960	79,890	72,995	70,377
<b>Total Flow</b>	982,445	947,042	968,818	911,530	937,827	938,004	965,781
<b>Monthly Avg.</b>	81,870	78,920	80,735	75,961	78,152	77,908	80,482
<b>Monthly Max.</b>	101,839	94,990	107,735	93,161	91,527	89,335	98,759
<b>Monthly Min.</b>	65,591	69,936	56,628	59,960	61,223	68,580	70,377
<b>Year</b>	<b>2009</b>	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>
<b>Annual avg. Daily Flow m3/day</b>	2,692	2,584	2,654	2,495	2,545	2,562	2,645
<b>Max Daily</b>	4,434	4,286	4,490	4,087	4,087	3,733	4,656
<b>Rated Capacity</b>	6445	6445	6445	6445	6445	6445	6445
<b>% Max Day</b>	69%	67%	70%	63%	63%	58%	72%
<b>% Rated Capacity</b>	42%	40%	41%	39%	40%	40%	41%

## Water Use Summary for 2009

<u>Water produced at the Water Treatment Plant</u>	<u>982,445 m<sup>3</sup></u>
Amount of water used by Customers including Bulk Watering	614,506 m <sup>3</sup>
Amount of water used for Hydrant flushing	6,818 m <sup>3</sup>
Amount of water loss due to hydrant tampering	3,827 m <sup>3</sup>
Amount of water sold at Public Dispensing	35 m <sup>3</sup>
Estimated amount of water used for flushing and swabbing of new watermains	358 m <sup>3</sup>
Estimated amount of water used by Fire Department for practices and fires	295 m <sup>3</sup>
Watermain and/or service connection leak	80,550 m <sup>3</sup>
Chlorine Booster Station	35,800 m <sup>3</sup>
<hr/>	
Total amount of water accounted for in 2009	742,189 m <sup>3</sup>
Total amount of water Distributed from Treatment Plant	<u>982,445 m<sup>3</sup></u>
Total amount of water unaccounted for in 2009	240,256 m <sup>3</sup>

Therefore approximately 24.4% of the total water supply remained unaccounted for in 2009.

$$\begin{aligned}
 \text{Total amount of water unaccounted for in 2009} &= 240,256 \text{ m}^3 \\
 \text{Divided by 1 year} &= \frac{240,256}{365} \\
 \text{Per/day loss} &= 658 \text{ m}^3 \\
 \text{Divided by hours/day} &= \frac{658}{24} \\
 \text{Loss per hour} &= 27.4 \text{ m}^3 / 60 \text{ minutes} = 0.46 \text{ m}^3 \\
 0.46 \text{ m}^3 &= 460 \text{ L/m} / 60 \text{ seconds} = \underline{\underline{7.62 \text{ L/sec}}}
 \end{aligned}$$

In 2009, supervisory control and data acquisition (SCADA) flow to distribution trending indicated that flows drop down to 5-7 L/sec at low flow times during the night. This indicates that there is some unaccounted for water loss within the system. A leak detection program is being investigated in 2010, which may include the purchase of specific equipment that is able to detect leaks through the use of non-destructive testing.

## **2. Ontario Drinking Water System Regulations**

### **2.1 THE SAFE DRINKING WATER ACT, 2002**

The purpose of the Act is to gather in one place all legislation and regulations relating to the treatment and distribution of drinking water, to protect human health through the control and regulation of drinking water systems and drinking water testing. The new Drinking Water Systems Regulation and its supporting regulations can be found at [www.ene.gov.on.ca](http://www.ene.gov.on.ca). The Safe Drinking Water Act will be incorporating a statutory standard of care, whereby every director and officer of a corporation (including municipal councillors) that owns a municipal drinking water system has a duty to take all reasonable steps to prevent any user of the system from being exposed to an unreasonable health risk that may arise from their consumption of drinking water. With this, municipal officials are expected to be informed of their drinking water system and acquainted with drinking water legislation and regulations.

On May 14, 2004, the Ministry of the Environment filed a new certification regulation for operators of municipal and regulated non-municipal drinking water systems, titled *O.Reg. 128/04 Certification of Drinking Water System Operators and Water Quality Analysts* under the *Safe Drinking Water Act, 2002*: This new regulation ensures tougher certification and training rules for water system operators based on the classification of the Municipal Residential System. This regulation explains operating standards for Municipal Residential Subsystems and Limited Subsystems that are to be followed and maintained by the owner or operating authority of the subsystem including record-keeping re: operation of the subsystem, operation and maintenance manuals, operator training, and duties of the operator-in-charge.

### **2.2 THE DRINKING WATER PROTECTION REGULATION (O.Reg.170/03)**

Effective June 1, 2003, the Drinking Water Protection Regulation (O.Reg. 170/03) replaced the Drinking Water Protection Regulation for larger Waterworks (O.Reg. 459/00). Regulation 170/03 sets water treatment standards for a variety of water systems and includes a number of supporting regulations, including the Drinking Water Quality Standards Regulation (O.Reg. 169/03) which prescribes standards for 161 physical/chemical, microbiological and radiological parameters.

### **2.3 SUSTAINABLE WATER AND SEWAGE SYSTEMS ACT, 2002**

This Act ensures clean, safe drinking water for Ontario residents by making it mandatory for municipalities to assess and cost-recover the full amount of water and sewer services. A report to the Ministry on the full cost of water and wastewater services is to include a cost recovery plan for operating costs, source protection costs, financing costs, renewal and replacement costs and improvement costs associated with treating and distributing water to the public.



## **2.4 DEFINITIONS**

**Accredited Lab**, all laboratories that test drinking water must be accredited for the tests they perform by the Standards Council of Canada or its equivalent. Accreditation involves performance testing and auditing to ensure that laboratories follow appropriate procedures using acceptable methods.

**Chlorine Residual** – chlorine residual in water is a component of chlorine after the initial disinfection or chlorine demand has been satisfied. The maintenance of a chlorine residual in the distribution system is intended to keep a persistent disinfectant residual to protect the water from microbiological re-contamination and serve as an indicator of distribution system integrity.

**GUDI** Groundwater Under Direct Influence of Surface Water – in some groundwater supplies, situations may exist where contaminants typically found on the ground or in surface water, such as a lake or river, find their way into the groundwater and can be pumped from the well into the water distribution system. Such a system is referred to as Groundwater Under Direct Influence of Surface Water or GUDI. This can be caused by a number of different factors including the geology surrounding a well, insufficient travel time between the well intake and surface water or a defect in the well. A true groundwater supply would normally be free of harmful microbiological contaminants and reflect only disinfection be provided as a minimum level of treatment along with a minimum chlorine residual after 15 minutes contact time.

**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.

**Inorganic parameters** – substances such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production mining, farming, or domestic plumbing.

**OG Operational Guidelines** are established for parameters that need to be controlled to ensure efficient and effective treatment and distribution of water.

**mg/L** milligrams per litre is a measure of concentration of a parameter in water, sometimes called parts per million (ppm).

## Municipality of Brighton 2009 Annual Report on Drinking Water Quality

**µg/L** micrograms per litre is a measure of concentration of a parameter in water, sometimes called parts per billion (ppb).

**Parameter** is a substance that is sampled and analyzed in the water.

**Potable Water** is water from ground or surface sources that is supplied for human consumption.

**Raw Water** – water entering the treatment plant prior to any chemical addition. Raw water sampling and analysis provides a measure of source water quality which allows assessment and adjustment of treatment process; information on the source of any contaminants; and long term trends in source water quality.

**Total Trihalomethanes (THM)** – are the most widely occurring synthetic organics found in chlorinated drinking water. The principal source of Trihalomethanes is the action of chlorine with naturally occurring organics (material that comes from plant or animal sources). The maximum acceptable concentration for THM is 0.10 mg/L based on four quarter moving annual average test results, tested at a remote point site in the distribution system.

**Turbidity** – turbidity in water is caused by the presence of suspended matter such as clay, silt and microscopic organisms and is commonly present in the source water as a result of soil runoff. The substances and particles that cause turbidity can be responsible for interference with disinfection, can be a source of disease-causing organisms, and can shield pathogenic organisms from the disinfection process.

**Treated Water** is source water that has been altered in order to disinfect and ensure treatment has producing water of equal or better quality.

### 3 Requirements of the Drinking Water System Regulation

#### 3.1 Sample & Test drinking water in a frequency designed to reflect the type and user of the system. Specific requirements for each category differ depending on the size and population served.

- Category of System - Brighton Well Supply is categorized as **Large Municipal Residential**, which is defined as a municipal drinking water system that serves a major residential development of more than 100 private residences.
- Sampling & Testing requirements for a Large Municipal Residential drinking water system state that the owner of the drinking-water system and the operating authority for the system shall ensure samples be tested for the following:
  - Microbiological – O.Reg. 170/03 Schedule 10 requires at least eight distribution samples, plus one additional distribution sample for every 1,000 people served by the system, are taken every month, with at least one of the samples being taken each week. With this, 13 treated distribution samples would be required monthly. Brighton currently samples at least 7 distribution samples weekly or approximately 28 samples monthly, and 1 treated water sample weekly. These samples are tested for Escherichia coli or fecal coliforms and total coliforms, and 25% of the samples are tested for general bacteria populations expressed as background colony counts on the total coliform membrane filter or as colony counts on a heterotrophic plate count. Raw water samples are required to be tested at least once every week from the drinking-water system’s raw water before any treatment is applied to the water. Raw water was sampled weekly from Well #1, Well #2 and Well #3.

*Table 2-Microbiological Sampling & Testing-Large Municipal Residential*

Source	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
Well #1	4	4	4	5	4	5	4	4	5	4	4	5	52
Well #2	4	4	4	5	4	5	4	4	5	4	4	5	52
Well #3	4	4	4	5	4	5	4	4	5	4	4	5	52
<b>Total Raw Samples</b>	12	12	12	15	12	15	12	12	15	12	12	15	156

Treated Water POE (Point of Entry)	4	4	4	5	4	5	4	4	5	4	4	5	52
Distribution System	28	28	28	35	28	35	28	28	35	28	28	35	364
<b>Total Treated Samples</b>	32	32	32	40	32	40	32	32	40	32	32	40	416

Microbiological Results	Number of Samples	Range of E.Coli Results	Range of Total Coliform Results	Number of HPC Samples	Range of HPC Results
Raw	156	<1	<1	0	0
Treated Water POE-Treatment Plant	52	Absent	Absent	52	<10 - 70
Distribution	364	Absent	Absent	104	<10 - 130

## Municipality of Brighton 2009 Annual Report on Drinking Water Quality

<b>Lead Samples</b>	<b>Plumbing</b>	<b>Pass</b>	<b>Fail</b>
Spring	45	45	0
Fall	44	43	1
Total Samples	89	88	1

There was one adverse sample during the fall sampling period, however, the second sample and the subsequent re-samples were all within acceptable levels.

<b>Lead Samples</b>	<b>Distribution</b>	<b>Pass</b>	<b>Fail</b>
Spring	4	4	0
Fall	4	4	0
Total Samples	8	8	0

Chemical Sampling & Testing – O.Reg. 170/03 Schedule 13 requires Large Municipal Residential Systems be tested for the following:

- (i) Inorganics (Schedule 23) be tested at least every 12 months if the system obtains water from a raw water supply that is surface water. Note that once the water system switches to groundwater (wells) then sampling for organic/inorganic parameters can be reduced to every 36 months.
- (ii) Lead - at least one sample in the distribution system is taken every 12 months from a point in the drinking-water system's distribution system or in plumbing that is connected to the drinking-water system that is likely to have an elevated concentration of lead. In 2007 new Regulations were added to test for Lead - Schedule 15.1-5. Sampling is to be conducted from December 15<sup>th</sup> to April 15<sup>th</sup> in the spring, and June 15<sup>th</sup> to October 15<sup>th</sup> in the fall in various locations. This constitutes 52 samples for each reporting period.
- (iii) Organics – if the system obtains water from a raw water supply that is surface water, at least one water sample is taken every 12 months. When the raw water source is groundwater (wells) then at least one water sample must be taken every 36 months.
- (iv) Trihalomethanes – at least one distribution sample is taken every three months from a point in the drinking-water system that is likely to have an elevated potential for the formation of Trihalomethanes.
- (v) Nitrate and Nitrite, one water sample taken every three months.
- (vi) Sodium, one water sample taken every 60 months.
- (vii) Fluoride, one water sample taken every 60 months.

See **Appendix I** – Part III Form 2 for Brighton's Annual Report electronic submission to MOE; there were no exceedances of organic or inorganic parameters tested during this period.

### **3.2 Use an Accredited Laboratory**

Drinking water systems must use a licensed laboratory as outlined in the Drinking Water Testing Services Regulation (O.Reg.248/03) which became law in June 2003.

- Laboratory Services Notification Forms O.Reg. 170/03 were completed and submitted to the Ministry of Environment. Confirmation that Caduceon Laboratories in Kingston, Nepean, and Ottawa as well as Lakefield Research are listed with The Standards Council of Canada as an accredited lab was made. Notifications were sent to the labs to ensure clear and complete notification is reported when adverse water quality incidents may be reported.

### **3.3 Report adverse test results**

Any test result that exceeds any of the standards in Schedules 1, 2, 3 (other than fluoride) in the Ontario Drinking Water Quality Standards (O.Reg.169/03) must be reported verbally and in writing to both the local Medical Officer of Health and the Ministry of the Environment Spills Action.

### **3.4 Obtain a Certificate of Approval and a Permit to Take Water for a municipal residential drinking water system from the ministry.**

The approvals process is currently in a transitional phase and will be replaced with a new process under the Drinking Water Quality Management Standard (DWQMS).

DWQMS was created following the Walkerton Inquiry, wherein the Honourable Justice Dennis R. O'Connor released a report recommending new approval requirements for municipal drinking water systems. Accordingly, the Government of Ontario initiated the Municipal Drinking Water Licensing Program. This program requires that owners meet several key elements in order to obtain a new license. These elements include:

- A permit to take water
- A drinking water works permit (replacing the existing Certificate of Approval)
- An accredited operational plan
- An approved financial plan
- Successful completion of internal audits
- Successful completion of external audits

The Municipal Drinking Water Licensing Program focuses on incorporating quality management into municipal water administration and operations; and is comparable to ISO (International Organization for Standardization) accreditation in the private sector. Another key aspect of the program is its emphasis on Continual Improvement.

In 2009, Brighton finalized its operational plan and submitted to both the Ministry of the Environment and the Canadian General Standards Board for a systems audit. Upon successful completion of the audit, Brighton will become an accredited operating authority and will make the transition from operating under a Certificate of Approval to operating under a Municipal Drinking Water System License and a Drinking Water Works Permit.

***Brighton Water Well Supply System's Approvals include:***

- 1) Certificate of Approval Number 9008-7DHQFB dated the 9<sup>th</sup> day of February, 2009.
- 2) Permit to Take Water No. 2001-62MNU2 was issued to the municipality on September 27, 2004 and authorizes the withdrawal of water from each of the production wells Nos. 1, 2 and 3 at a maximum rate of 24.9 L/s, 1,494 L/min. or 2,151,360 L/day.

Well No. 1 24.9 L/s, 1,494 L/min or 2,151,360 L/day

Well No. 2 24.9 L/s, 1,494 L/min or 2,151,360 L/day

Well No. 3 24.9 L/s, 1,494 L/min or 2,151, 360 L/day

***3.5 Have certified operators or trained persons, depending on category of system.***

***Certified Operators include:***

Mike Ryckman, Overall Responsible Operator, Supervisor, WDS III

Mark Alexander, WDS II

Steve Wong, WDS II

Operator training requirements, under O. Reg. 128/04 state that the annual number of hours of training required under Section 29 in each year will be a total of 40 hours of which 14 hours or more are continuing education and the remaining hours as on-the-job practical training.

***3.6 Prepare an annual report in order that the public has access to information on the status of drinking water.***

Annual reports are prepared in accordance with O.Reg.170/03. Drinking water reports are available at both municipal offices and the municipal website; the public is informed via newspaper when it is available. The Annual Report on Drinking Water must be passed by Resolution of Council.

***3.7 Prepare an Annual Summary Report, on municipal residential systems for municipal Councillors, members of a municipal service board, or the board of directors of municipal business corporations, as appropriate.***

This report must include information regarding the requirements of the Act (Section 3.1 of this report), the regulations (Section 2), the System's approval (Section 3.4) and any order that the system failed to meet during the period of the report noting the duration of the failure and the measures taken to correct the failure. The report must also include flow rates of the water supplied during the period including monthly average, maximum daily flows, and the rated capacity for the purpose of assessing the capability of the system (Table 1), and daily instantaneous peak flow rates (Appendix III). The report must include information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and future planned uses of the system.

#### **4 Upgrades to the Drinking Water System to Correct Deficiencies.**

No upgrades were needed to the Brighton Well Supply or Treatment Plant Facility to maintain compliance with the regulations and standards set forth by the Ministry of the Environment.

#### **5 Small Municipal Non-Residential Systems**

Community centers such as Codrington Community Centre and Hilton Hall are categorized as Small Municipal Non-Residential which is defined as a municipal drinking water system that does not serve a residential development, is not capable of supplying drinking water at a rate of more than 2.9 Litres per second, and serves a designated facility or public facility.

On September 10th, 2008, *Ontario Regulation 318/08* was introduced for Small Municipal Non-Residential systems, which includes rural community halls such as Codrington Community Centre and Hilton Hall. The new regulation reduces the financial burden on owners but maintains a high level of public health protection. Only microbiological sampling of *E. Coli* and *Total Coliforms* is required.

##### **5.1 Codrington Community Centre Well Supply**

Microbiological sampling is conducted bi-weekly at the Codrington Community Centre. The water system at this location consists of UV disinfection and filtration. Two adverse samples were recorded at this site in 2009, the first on November 17 with a Total Coliform (TC) count of 1; and the second on November 24 with a Total Coliform (TC) count of 2. Following these adverse results, the Haliburton, Kawartha, Pine Ridge District Health Unit was notified and provided instructions to replace the UV disinfection light and filter, and re-sample. Re-samples indicated no adverse results.

##### **5.2 Hilton Hall Well Supply**

Microbiological sampling is conducted bi-weekly at Hilton Hall. The water system at this location consists of UV disinfection and filtration. One adverse sample was recorded at this site in 2009, on July 22 with a Total Coliform (TC) count of 9. Following these adverse results, the Haliburton, Kawartha, Pine Ridge District Health Unit was notified and provided instructions to replace the UV disinfection light and filter, and re-sample. Re-samples indicated no adverse results.

## 6 Conclusion

In 2009, the Brighton Well Supply and Distribution System achieved full compliance with our Certificate of Approval and Ontario Regulation 170/03. Additionally, submissions were made to the Ministry of the Environment and the Canadian General Standards Board to ensure ongoing compliance as the transition is made to operate under the new Drinking Water Quality Management Standard.

### **The Municipality of Brighton's Quality Policy**

The Municipality of Brighton is committed to providing safe and reliable drinking water that is compliant with the Safe Drinking Water Act and applicable regulations and legislation. We will promote an effective Quality Management System to ensure quality and consistency in all operations associated with the Drinking Water System. We will continuously review, maintain and improve our Quality Management System.

**MUNICIPALITY OF BRIGHTON**

The Municipality of Brighton's Public Works and Environmental Services Department has implemented a Quality Management System for its drinking water system. Our Quality Policy guides every aspect of our operations as related to the supply of safe drinking water.

**OUR QUALITY POLICY**

We are committed to:

- The highest standards of quality
- Compliance with applicable legislation and regulations
- Continual improvement



Appendix 1 - 2009 Monthly Summary

Brighton Water Supply Monthly Values													
	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	ANNUAL
<b>FLOWs</b> <small>minimum demand/day 6:45 midday as per Certificate of Approval</small>													
TOTAL FLOWS (m <sup>3</sup> )	75,560	65,591	75,067	78,919	94,465	94,392	99,835	101,839	88,957	70,873	66,742	70,205	982,445
DAILY AVG. FLOW (m <sup>3</sup> )	2,437	2,343	2,422	2,631	3,061	3,229	3,144	3,285	2,971	2,286	2,225	2,265	2,692
MAXIMUM DAILY FLOW (m <sup>3</sup> )	3,010	2,413	2,535	2,849	4,434	4,092	4,099	3,986	3,431	2,419	2,441	2,743	2,413
MINIMUM DAILY FLOW (m <sup>3</sup> )	2,251	2,275	2,328	2,472	2,597	2,374	1,651	2,751	2,345	2,135	2,108	2,151	2,751
<b>CHLORINE CONSUMPTION</b>													
TOTAL USED (kg)	74.80	78.30	78.00	85.10	107.80	105.50	107.90	116.20	100.20	88.80	78.00	79.00	1,099.60
DAILY AVERAGE (kg)	2.40	2.80	2.50	2.80	3.50	3.20	3.60	3.70	3.30	2.90	2.60	2.50	2.98
AVERAGE Pre-DAILY DOSAGE (mg/L)	0.97	1.12	1.02	1.04	1.08	1.09	1.14	1.13	1.07	1.20	1.13	1.09	1.09
<b>CHLORINE RESIDUALS</b> <small>(monthly average)</small>													
FREE CHLORINE (POE)	0.98	1.05	0.99	1.05	1.06	1.02	0.99	1.01	0.99	1.04	1.03	1.03	1.02
FREE CHLORINE (Dist Sys In)	0.96	1.01	1.01	1.01	1.02	1.02	1.03	1.01	0.92	0.96	0.92	0.87	0.98
NOTE: POE measured by on-line instrumentation / Distribution measured by operator's using HACH kit.													
<b>TURBIDITY</b> <small>(mg/L Point of Entry)</small>													
MONTHLY AVERAGE	0.03	0.04	0.03	0.040	0.060	0.060	0.060	0.060	0.060	0.060	0.06	0.060	0.052
Range	0.02-0.07	0.03-0.44	0.03-0.05	0.03-0.21	0.06-0.08	0.06-0.07	0.06-0.07	0.06-0.07	0.06-0.08	0.06-0.07	0.06-0.08	0.06-0.09	
<b>pH</b> <small>Point of Entry</small>													
MONTHLY AVERAGE	7.53	7.54	7.52	7.45	7.45	7.48	7.47	7.43	7.45	7.45	7.35	7.46	7.47
<b>TEMPERATURE</b> <small>(°C.) Point of Entry</small>													
MONTHLY AVERAGE	9.90	9.94	10.12	10.25	10.28	10.21	10.30	10.31	10.26	10.15	9.98	9.85	10.13

**Appendix 2**

**Drinking-System Regulations O.Reg. 170/03**

**Part III Form 2**

**Section 11. ANNUAL REPORT.**

Drinking-Water System Number:	<b>220000807</b>
Drinking-Water System Name:	<b>Brighton Well Supply</b>
Drinking-Water System Owner:	<b>Corporation of the Municipality of Brighton</b>
Drinking-Water System Category:	<b>Large Municipal Residential</b>
Period being reported:	<b>January 1 – December 31, 2009</b>

<p><i>Complete if your Category is Large Municipal Residential or Small Municipal Residential</i></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [ x ]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ x ] No [ ]</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Municipal Offices: 35 Alice St., Brighton 67 Sharp Rd. Brighton</p> </div>	<p><i>Complete for all other Categories.</i></p> <p>Number of Designated Facilities served: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</p> <p>Number of Interested Authorities you report to: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</p>
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Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
Presqu'ile Provincial Park- Parks Ontario	

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [ x ] No [ ]

## Municipality of Brighton 2009 Annual Report on Drinking Water Quality

Indicate how you notified system users that your annual report is available, and is free of charge.

Public access/notice via the web

Public access/notice via Government Office

Public access/notice via a newspaper

Public access/notice via Public Request

Public access/notice via a Public Library

Public access/notice via other method \_\_\_\_\_

### Describe your Drinking-Water System

In 2009, water sources at the Brighton Well Supply consisted of three drilled wells. The only raw water source is groundwater which is captured from a deep aquifer by drilled wells located adjacent to the old Upper Reservoir site. There are three wells that draw water from the aquifer under the reservoir area: Well Nos. 1, 2 and 3 pumps work on rotation. A fail safe control system has been installed to ensure that an upward hydraulic gradient is maintained at all times in the raw water supply aquifer. This system includes water level sensors in each observation and production well, an alarm system equipped with pre-determined set-points for well depth, and a SCADA data-log system. The work was completed and commissioned in October, 2005.

Disinfection of water to eliminate disease causing organisms is the most important step in the water treatment process. In October 2005 our upgraded system came on-line which changed our system from an open surface water reservoir system to an enclosed concrete storage reservoir. This enables us to have more contact time for chlorination, which is done by injecting Chlorine gas into the water as it enters into one of two cells (*which is called Pre-Chlorination*). The concrete water storage reservoir is approximately 39 m x 58 m, and consists of two cells. Each cell is equipped with baffles and provides  $2800 \text{ m}^3 \times 2 = 5600 \text{ m}^3$  of water storage and equipped with overflow, drain system, piping and appurtenances, and a water main from the **Water Treatment Plant** (WTP) and reservoir to the existing distribution system (DS). A WTP building approximately 39 m x 10 m housing a primary and secondary disinfection system consisting of two (2) gas chlorinators, weigh scales, vacuum regulators, injectors and appurtenances to facilitate application of chlorine solution for pre-chlorination at a point where water enters either cell from the wells and also post-chlorination as water enters the DS. Instrumentation and controls including on-line chlorine residual analyzer and turbidity meters measure the chlorine residuals and turbidity in the reservoirs and the outlet to the DS. Emergency power is provided by an 80 kW pad mounted standby generator including automatic transfer switch. There is a drain/bypass line from the WTP and reservoirs to outfall through a bypass detention pond. The Brighton Well Supply is classified as Water Distribution and Supply Class III.

List all water treatment chemicals used over this reporting period

Chlorine Gas
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Municipality of Brighton 2009 Annual Report on Drinking Water Quality

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	156	<1	<1	0	0
Treated	52	Absent	Absent	52	<10-70
Distribution	364	Absent	Absent	104	<10-130

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	8760	0.00-0.44 ntu's
Chlorine	8760	0.43-3.08 mg/L
Fluoride (If the DWS provides fluoridation)		

**NOTE:** For continuous monitors use 8760 as the number of samples.

*NOTE: Record the unit of measure if it is not milligrams per litre.*

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

## Municipality of Brighton 2009 Annual Report on Drinking Water Quality

### Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedances
Arsenic	Nov 25/08	<0.0001	mg/L	No
Barium	Nov 25/08	0.062	mg/L	No
Boron	Nov 25/08	<0.005	mg/L	No
Cadmium	Nov 25/08	<0.00002	mg/L	No
Chromium	Nov 25/08	<0.002	mg/l	No
*Lead				
Mercury	Nov 25/08	<0.00002	mg/L	No
Selenium	Nov 25/08	0.0025	mg/L	No
Sodium	Nov 13/07	0.0006	mg/L	No
Uranium	Nov 25/08	0.00052	mg/l	No
Fluoride	Nov 13/07	<0.1	mg/L	No
Nitrite	Dec 18/09	<0.1	mg/L	No
Nitrate	Dec 18/09	2.7	mg/L	No
Nitrate + Nitrite	Dec 18/09	2.7	mg/L	No

\*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems.

Summary of lead testing under Schedule 15.1 during this reporting period  
(Applicable to the following drinking water systems; large municipal residential systems, small Municipal residential systems and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing	89	0.00004 - 0.0560	1
Distribution	8	0.00002 – 0.00503	0

### Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedances
Alachlor	28 Nov/08	<0.3	µg/L	No
Aldicarb	28 Nov/08	<3	µg/L	No
Aldrin + Dieldrin	27 Nov/08	<0.02	µg/L	No
Atrazine + metabolites	28 Nov/08	<0.5	µg/L	No
Azinphos-methyl	28 Nov/08	<1	µg/L	No
Bendiocarb	28 Nov/08	<3	µg/L	No
Benzene	27 Nov/08	<0.5	µg/L	No
Benzo(a)pyrene	28 Nov/08	<0.005	µg/L	No
Bromoxynil	28 Nov/08	<0.3	µg/L	No
Carbaryl	28 Nov/08	<3	µg/L	No
Carbofuran	28 Nov/08	<1	µg/L	No

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Carbon Tetrachloride	27 Nov/08	<0.2	µg/L	No
Chlordane (Total)	27 Nov/08	<0.04	µg/L	No
Chlorpyrifos	28 Nov/08	<0.5	µg/L	No
Cyanazine	28 Nov/08	<0.5	µg/L	No
Diazinon	28 Nov/08	<1	µg/L	No
Dicamba	28 Nov/08	<5	µg/L	No
1,2-Dichlorobenzene	27 Nov/08	<0.1	µg/L	No
1,4-Dichlorobenzene	27 Nov/08	<0.2	µg/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	27 Nov/08	<0.1	µg/L	No
1,2-Dichloroethane	27 Nov/08	<0.1	µg/L	No
1,1-Dichloroethylene (vinylidene chloride)	27 Nov/08	<0.1	µg/L	No
Dichloromethane	27 Nov/08	<0.3	µg/L	No
2,4-Dichlorophenol	28 Nov/08	<0.1	µg/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	28 Nov/08	<5	µg/L	No
Diclofop-methyl	28 Nov/08	<0.5	µg/L	No
Dimethoate	28 Nov/08	<1	µg/L	No
Dinoseb	28 Nov/08	<0.5	µg/L	No
Diquat	2 Dec/08	<5	µg/L	No
Diuron	28 Nov/08	<5	µg/L	No
Glyphosate	2 Dec/08	<25	µg/L	No
Heptachlor + Heptachlor Epoxide	27 Nov/08	<0.1	µg/L	No
Linadane (Total)	27 Nov/08	<0.1	µg/L	No
Malathion	28 Nov/08	<5	µg/L	No
Methoxychlor	27 Nov/08	<0.1	µg/L	No
Metolachlor	28 Nov/08	<3	µg/L	No
Metribuzin	28 Nov/08	<3	µg/L	No
Monochlorobenzene	27 Nov/08	<0.2	µg/L	No
Paraquat	2 Dec/08	<1	µg/L	No
Parathion	28 Nov/08	<3	µg/L	No
Pentachlorophenol	28 Nov/08	<0.1	µg/L	No
Phorate	28 Nov/08	<0.3	µg/L	No
Picloram	28 Nov/08	<5	µg/L	No
Polychlorinated Biphenyls(PCB)	27 Nov/08	<0.05	µg/L	No
Promethyne	28 Nov/08	<0.1	µg/L	No
Simazine	28 Nov/08	<0.5	µg/L	No
THM (NOTE: show latest annual average)	24 Nov/09 18 Aug/09 26 May/09 17 Feb/09	Annual Average 0.0038	mg/l	No
Sodium	20 Nov/07	4.9	mg/L	No
Nitrate+Nitrite	26 Nov/08	2.9	mg/L	No
Bromochloromethane	27 Nov/08	1.4	µg/L	No
Temephos	28 Nov/08	<10	µg/L	No
Terbufos	28 Nov/08	<0.3	µg/L	No
Tetrachloroethylene	27 Nov/08	<0.2	µg/L	No
2,3,4,6-Tetrachlorophenol	28 Nov/08	<0.1	µg/L	No

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2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	28 Nov/08	<10	µg/L	No
Trifluralin	28 Nov/08	<0.5	µg/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample

**Appendix 3**

**Drinking-System Regulations O.Reg. 170/03**

**Part III Form 2**

**Section 11. ANNUAL REPORT.**

Drinking-Water System Number:	<b>260033813</b>
Drinking-Water System Name:	<b>Codrington Community Centre Well Supply</b>
Drinking-Water System Owner:	<b>The Corporation of the Municipality of Brighton</b>
Drinking-Water System Category:	<b>Small Municipal Non Residential</b>
Period being reported:	<b>January 1 - December 31, 2009</b>

<p><i>Complete if your Category is Large Municipal Residential or Small Municipal Residential</i></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [ ]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ ] No [ ]</p> <p>Location where Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; height: 80px; width: 100%;"></div>	<p><i>Complete for all other Categories.</i></p> <p>Number of Designated Facilities served:  <div style="border: 1px solid black; width: 100px; height: 20px;"></div></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</p> <p>Number of Interested Authorities you report to:  <div style="border: 1px solid black; width: 100px; height: 20px;"></div></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</p>
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List Drinking-Water Systems, which receive all of their drinking water from your system:

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [ ] No [ ]

Indicate how you notified system users that your annual report is available, and is free of charge.

- [ X ] Public access/notice via the web
- [ X ] Public access/notice via Government Office
- [ X ] Public access/notice via a newspaper



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- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method \_\_\_\_\_

Describe your Drinking-Water System

One well supplies water to Hall, inline filter and UV for disinfection.

List all water treatment chemicals used over this reporting period

None

Were any significant expenses incurred to?

- Install required equipment**
- Repair required equipment**
- Replace required equipment**

**Describe**

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre?

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
17 Nov 2009	Total Coliform	1.0	Cfu/100mL	UV light & filter replaced	20 Nov 2009
24 Nov 2009	Total Coliform	2.0	Cfu/100mL	Resample & Test OK	26 Nov 2009

Microbiological testing done under section 8 (2) during this reporting period

	Number of Samples	Range of E.Coli or Fecal Results (cfu/100mL)	Range of Total Coliform Results (cfu/100mL)	Number of HPC Samples	Range of HPC Results (#-#)
Treated	26	<1	<1 – 2.0		

Operational testing done under Schedule 7, 8 or 9 during the period covered by this Annual Report.

	Number of Grab	Range of Results (#-#)

**NOTE:** For continuous monitors use 8760 as the number of samples.

Municipality of Brighton 2009 Annual Report on Drinking Water Quality

	Samples	
Turbidity		
Chlorine		
Fluoride (If the DWS provides fluoridation)		

**NOTE: Record the unit of measure if it is not milligrams per litre.**

Summary of additional testing and sampling carried out in accordance with the requirement of an approval or order.

Date of order or C of A	Parameter	Date Sampled	Result	Unit of Measure

Summary of Inorganic parameters tested during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
<i>Antimony</i>				
<b>Arsenic</b>				
<b>Barium</b>				
<b>Boron</b>				
<b>Cadmium</b>				
<i>Chromium</i>				
<i>Lead</i>				
<b>Mercury</b>				
<b>Selenium</b>				
<b>Uranium</b>				
<b>Fluoride</b>				
<b>Nitrite</b>				
<b>Nitrate</b>				

Summary of Organic parameters sampled during this reporting period or most recent

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor				
Aldicarb				
Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				
Bendiocarb				

Municipality of Brighton 2009 Annual Report on Drinking Water Quality

Benzene				
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride				
Chlordane (Total)				
Chlorpyrifos				
Cyanazine				
Diazinon				
Dicamba				
1,2-Dichlorobenzene				
1,4-Dichlorobenzene				
Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane				
1,1-Dichloroethylene (vinylidene chloride)				
Dichloromethane				
2,4 Dichlorophenol				
2,4-Dichlorophenoxy acetic acid (2,4-D)				
Diclofop-methyl				
Dimethoate				
Dinoseb				
Diquat				
Diuron				
Glyphosate				
Heptachlor + Heptachlor Epoxide				
Linadane (Total)				
Malathion				
Methoxychlor				
Metolachlor				
Metribuzin				
Monochlorobenzene				
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls(PCB)				
Prometryne				
Simazine				
THM (NOTE: show latest quarterly average)				
Temephos				

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Terbufos				
Tetrachloroethylene				
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene				
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				
Trifluralin				
Vinyl Chloride				

**List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.**

Parameter	Result Value	Unit of Measure	Date of Sample

(Only if category is large municipal residential, small municipal residential, large municipal non residential, small municipal non residential, large non municipal non residential)

**Appendix 4**

**Drinking-System Regulations O.Reg. 170/03**

**Part III Form 2**

**Section 11. ANNUAL REPORT.**

Drinking-Water System Number:	<b>260033800</b>
Drinking-Water System Name:	<b>Hilton Hall</b>
Drinking-Water System Owner:	<b>Municipality of Brighton</b>
Drinking-Water System Category:	<b>Small Municipal none Residential</b>
Period being reported:	<b>January 1 - December 31, 2009</b>

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [ ]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [ ] No [ ]</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; height: 60px; width: 100%;"></div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</p> <p>Number of Interested Authorities you report to:</p> <div style="border: 1px solid black; height: 20px; width: 100%;"></div> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</p>
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Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?  
 Yes [ ] No [ ]

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Indicate how you notified system users that your annual report is available, and is free of charge.

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method \_\_\_\_\_

Describe your Drinking-Water System

One well supplies water to Hall, inline filter and UV for disinfection.

List all water treatment chemicals used over this reporting period

None

Were any significant expenses incurred to?

- Install required equipment**
- Repair required equipment**
- Replace required equipment**

**Please provide a brief description and a breakdown of monetary expenses incurred**

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
22 July 2009	Total Coliform	9.0	Cfu/100mL	UV light & filter replaced	28 July 2009

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Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Or Fecal Results (cfu/100mL)	Range of Total Coliform Results (cfu/100mL)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Treated	25	<1	<1 – 9.0		

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity		
Chlorine		
Fluoride (If the DWS provides fluoridation)		

**NOTE:** For continuous monitors use 8760 as the number of samples.

**NOTE: Record the unit of measure if it is not milligrams per litre.**

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony				
Arsenic				
Barium				
Boron				
Cadmium				
Chromium				
Lead				
Mercury				
Selenium				
Sodium				
Uranium				
Fluoride				

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Nitrite				
Nitrate				

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor				
Aldicarb				
Aldrin + Dieldrin				
Atrazine + N-dealkylated metabolites				
Azinphos-methyl				
Bendiocarb				
Benzene				
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride				
Chlordane (Total)				
Chlorpyrifos				
Cyanazine				
Diazinon				
Dicamba				
1,2-Dichlorobenzene				
1,4-Dichlorobenzene				
Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane				
1,1-Dichloroethylene (vinylidene chloride)				
Dichloromethane				
2,4 Dichlorophenol				
2,4-Dichlorophenoxy acetic acid (2,4-D)				
Diclofop-methyl				
Dimethoate				
Dinoseb				
Diquat				
Diuron				
Glyphosate				
Heptachlor + Heptachlor Epoxide				
Lindane (Total)				
Malathion				
Methoxychlor				
Metolachlor				



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Metribuzin				
Monochlorobenzene				
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls(PCB)				
Prometryne				
Simazine				
THM (NOTE: show latest annual average)				
Temephos				
Terbufos				
Tetrachloroethylene				
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene				
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				
Trifluralin				
Vinyl Chloride				

**List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.**

Parameter	Result Value	Unit of Measure	Date of Sample

(Only if DWS category is large municipal residential, small municipal residential, large municipal non residential, non municipal year round residential, large non municipal non residential)