Ontario Clean Water Agency
Agence Ontarienne Des Eaux

31 Station Road North, P.O. Box 549, Kirkland Lake, Ontario P2N 1N1
Tel: 705 567 3955 Fax: 705 567 7974 Website: www.ocwa.com

February 25, 2010

Gary Cunnington, Clerk/Treasurer and Council
The Corporation of the Township of McGarry
P.O. Box 99
Virginiatown, Ontario P0K 1X0

Re: 2009 Annual Report for the Virginiatown Well Supply System
2009 Annual Summary Report for the Virginiatown Well Supply System

Dear Mr. Cunnington and Council:

Ontario's Drinking Water Systems Regulation (O. Reg. 170/03) made under the *Safe Drinking Water Act in 2002;* requires that the owner of a drinking water system prepare an Annual Report and an Annual Summary Report which describes the operation of the system and the quality of its water.

Annual Report

The annual report must cover the period of January 1st to December 31st in a year and must be prepared not later than February 28th of the following year. Pursuant to the legislative requirements, enclosed for your records is the 2009 Annual Report for the Virginiatown Well Supply System.

Pursuant to the legislative requirements, Section 11 (6): the annual report must:

(a) contain a brief description of the drinking-water system, including a list of water treatment chemicals used by the system during the period covered by the report;

(b) summarize any reports made to the Ministry under subsection 18 (1) of the Act or section 16-4 of Schedule 16 during the period covered by the report;

(c) summarize the results of tests required under the Regulation, or an approval or order, including an OWRA order, during the period covered by the report and, if tests required under this Regulation in respect of a parameter were not required during that period, summarize the most recent results of tests of that parameter;

(d) describe any corrective actions taken under Schedule 17 or 18 during the period covered by the report;

(e) describe any major expenses incurred during the period covered by the report to install, repair or replace required equipment; and

(f) if the case of a large municipal residential system or a small municipal residential system, include a statement of where a report prepared under Schedule 22 will be available for inspection under subsection 12 (4) O. Reg. 170/03, s. 11 (6).

In addition, Section 11 (7) gives the direction that a copy of an annual report for the system is given, without charge, to every person who requests a copy and be made available for inspection by any member of the public during normal business hours. The reports should be made available at the office of the municipality, or at a location that is accessible to the users of the water system.

Annual Summary Report

The annual summary report must cover the period of January 1st to December 31st in a year and must be prepared not later than March 31st of the following year. Pursuant to the legislative requirements, enclosed for your records is the 2009 Annual Summary Report for the Virginiatown Well Supply System.

Pursuant to the legislative requirements, *Schedule 22 Summary Reports for Municipalities*, the annual summary must:

(2) (a) list the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and

(b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

(3) The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.

2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water licence, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5 (4), to the flow rates specified in the written agreement.

In addition, Section 12 (1) – 4 – gives the direction that a copy of the annual summary for the system is given, without charge, to every person who requests a copy and be made available for inspection by any member of the public during normal business hours. The reports should be made available at the office of the municipality, or at a location that is accessible to the users of the water system.

These reports were prepared by the Ontario Clean Water Agency (OCWA) on behalf of the Township of McGarry and are based on information kept on record by OCWA. The reports cover the period January 1st to December 31st 2009.

Please note that any Provincial Officers Orders or non-compliance issues that you have received directly from the Ministry of the Environment (MOE) should be reviewed. Where non-compliance with the Order or Issue is evident and it is not included in the attached 2009 Annual/Summary Report, then we recommend that this information be added to the report.

After your review and inclusion of any additional information, this report is to be provided to the Council members representing the Township of McGarry before March 31, 2010. Please ensure this distribution.

Yours truly,
Ontario Clean Water Agency

Original Signed

Ilona Bruneau
Process and Compliance Technician

Copy to: Mr. Paul Croisier – Drinking Water Inspector, Ministry of the Environment's Safe Drinking Water Branch

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

2009 Annual Compliance/Summary Report

for the

Virginatown Well Supply System

Prepared by the Ontario Clean Water Agency
on behalf of the Township of McGarry

Drinking-Water Systems Regulation O. Reg. 170/03

Part III Form 2
Section 11. ANNUAL REPORT.

Drinking-Water System Name:	**VIRGINIATOWN (McGARRY) WELL SUPPLY**
Drinking-Water System No.:	**220000317**
Drinking-Water System Owner:	McGarry, The Corporation of the Township of
Drinking-Water System Category:	Large Municipal, Residential System
Period being reported:	January 1, 2009 to December 31, 2009

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people?

Yes [ ] No X

Is your annual report available to the public at no charge on a web site on the Internet?

Yes [ ] No X

Location where Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

McGarry Municipal Office
27 Webster Street,
Virginiatown, Ontario P0K 1X0

Complete for all other Categories.

Number of Designated Facilities served:

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes [ ] No [ ]

Number of Interested Authorities you report to:

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes [ ] No [ ]

Drinking-Water Systems, which receive all of their drinking water from your system:

Town of Virginiatown, North Virginatown and Kearns

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 [ ]

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
[ ] 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 – Newsletter

Description of the Drinking-Water System

The Virginiatown Well Supply System is owned by the Corporation of the Township of McGarry and operated by the Ontario Clean Water Agency (OCWA). It is a communal ground water well supply that provides water to the communities of Virginiatown, North Virginiatown and Kearns.

The water treatment system obtains its water from one production well with a permitted capacity of 1420 m^3/d. The 26.2m deep drilled well is situated in the pumphouse building located approximately 6 km northeast of the Virginiatown Community Center, 500m east of Cheminis Road and 230m north of the Ontario Northland Railway tracks, adjacent to the Quebec border.

The raw water flow is measured at the pumphouse using a magnetic flow meter.
Sodium hypochlorite is injected at the well site using two chemical metering pumps (one duty and one standby) to provide disinfection. Two sodium hypochlorite tanks equipped with spill containment are located inside the pumphouse.

A 56 kW diesel engine standby power generator set, complete with a fuel storage tank and spill containment is available in the event of a power failure.

The water is pumped from the pumphouse to an on-line elevated reservoir having a useable volume of 1300 m^3. The water tower is located at the intersection of 27th Avenue and 27th Street in North Virginiatown. A feeder watermain, 6000 meter long and 200 mm in diameter, extends from the pumphouse, through Cheminis Road, Access Road, and Highway 66 to the tower.

The tower is equipped with an overflow bypass valve, draining pipe, a pressure transmitter, an alarmed chlorine analyzer, chart recorder and an uninterrupted power source to ensure operation of the analyzer during power interruptions.

The Virginiatown Well Supply is classified as Large Municipal Residential Drinking Water System and serves an estimated population of 840 residents throughout the Virginiatown,

North Virginiatown and Kearns. The distribution system consists mainly of 6, 8 and 10 inch ductile iron constructed water mains and has 41 fire hydrants throughout the communities to aid in fire protection. The service life of the system ranges from 51 years in North Virginiatown to 70 years in Virginiatown.

A list of all water treatment chemicals used over this reporting period

Sodium Hypochlorite – Disinfection

Were any significant expenses incurred to?

[ ] Install required equipment
X Repair required equipment
X Replace required equipment

Describe

A well and pump performance assessment was conducted by International Water Supply Ltd. on October 17th.

A sodium hypochlorite pump kit and additional fittings were purchased to ensure essential parts are available if problems arise.

The distribution system underwent several repairs during the reporting period.

February 3rd – Repaired 6 inch line break at valve on 27th Avenue
February 4th – Replaced broken valve with 6 inch pipe at 27th Avenue
March 9th - Replaced leaking service line on Connell Avenue
March 9th – Replaced fire hydrant and valve on corner of Monroe and Connell Avenue
March 24th – Repaired 6 inch line break at 7-28th Street
March 30th – Replaced curb stop replaced at 18 Reddick Avenue
April 13th – Repaired 10 inch water main
June 1st – Replaced 4 feet of ½ inch service at 16 Hummel Avenue
June 22nd – Replaced curb stop replaced at 25 Connell Avenue
July 20th – Replaced 13 feet of ½ copper pipe at 5 Connell Avenue
July 22nd – Replaced one foot of 5/8 copper pipe at 21 Connell Avenue
July 22nd – Replaced one foot of ½ copper pipe at 120 Government Road, Kearns
August 19th – Replaced one foot of ½ copper pipe at curb stop at 28 Lynch Avenue
September 11th – Replaced fitting on curb stop at 11 Connell Avenue
September 16th – Replaced 5 feet of ½ copper pipe on Kearns Avenue
October 15th – Replaced 2 food ½ copper line and valve at 87 Connell Avenue
October 16th – Replaced 2 curb stop valves at 87 Connell Avenue

No major breakdowns occurred as all routine maintenance procedures were accomplished through OCWA's computerized Workplace Management System

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
April 12, 2009 (AWQI# 87549)	Pressure	0	psi	Watermain break on a ten inch main resulted in boil water advisory affecting approximately 30 homes. The local health unit and MOE Spill's Action Center were notified. A Boil Water Advisory was issued by the health unit on April 13th. Watermain was repaired on April 13th. Two sets of bacteriological samples were collected 24 hours apart, on April 13th and 14th. All results indicated good quality water having no detectable total coliforms, *E. coli*. or background bacteria. The BWA was lifted and the incident was resolved on April 16, 2009	April 12, 2009
October 2, 2009	Lead	11.2	ug/L	The notice was faxed to MOE SAC, the Health Unit and the Township of McGarry office. A letter and copy of the results was provided to the residents within 7days as required.	October 2, 2009

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

	Number of Samples	Range of *E.coli* Results *(min# to max#)*	Range of Total Coliform Results *(min# to max#)*	Number of HPC Samples	Range of HPC Results *(min# to max#)*
Raw	52	<1 to <1	<1 to <1	0	N/A
Treated	52	<1 to <1	<1 to <1	52	<1 to 20
Distribution	121	<1 to <1	<1 to <1	69	<1 to 20

MAC = Maximum Allowable Concentration
MAC for *E. coli* = 0 Counts/100 mL
MAC for Total Coliforms = 0 Counts/100 mL

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

Continuous Monitoring in Treatment Process

	Number of Samples	Range of Results *(min# to max#)*	Unit of Measure
Chlorine (free)	8760	0.169 to 1.93	mg/L
NOTE: For continuous monitors use 8760 as the number of samples.			

Summary of Turbidity Data in the Raw Water

	Number of Samples	Range of Results *(min# to max#)*	Unit of Measure
Turbidity	35	0.0 to 0.38	NTU

Summary of Chlorine Residual Data in the Distribution System

	Number of Samples	Range of Results *(min# to max#)*	Unit of Measure	Standard
Free Chlorine (daily)	365	0.10 to 0.87	mg/L	0.05
Free Chlorine (weekly)	121	0.20 to 0.71	mg/L	0.05

Note: Free chlorine residuals are collected daily in the distribution system by certified municipal employees. Free chlorine residuals are tested weekly by OCWA staff when collecting bacteriological samples.

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

Date Legal Instrument Issued	Parameter	Date Sampled	Result	Unit of Measure
No additional sampling and testing were required for the Virginiatown Well Supply System during the 2009 reporting period due to an approval, order or other legal instrument.				

Summary of Nitrates & Nitrites tested during this reporting period.

Date of Sample	Nitrate Result Value	Nitrite Result Value	Unit of Measure	Exceedance
January 19	0.1	<0.05	mg/L	No
April 6	<0.1	<0.05	mg/L	No
July 6	<0.1	<0.05	mg/L	No
October 26	0.11	<0.05	mg/L	No

MAC = Maximum Allowable Concentration
MAC for Nitrate = 10 mg/L MAC for Nitrite = 1.0 mg/L

Summary of Total Trihalomethanes tested in the Distribution System during this reporting period

Date of Sample	Result Value	Unit of Measure	Running Average	Exceedance
January 19	<1.0	ug/L	<1.15	No
April 6	<1.0	ug/L		
July 6	1.6	ug/L		
October 26	<1.0	ug/L		

MAC = Maximum Allowable Concentration
MAC for Trihalomethanes = 100 ug/L (Four Quarter Running Average)

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)

The Virginiatown Well Supply System did not qualified for reduced sampling as described in section 15.1-1 of Ontario Regulation 170/03. Therefore sampling and testing was conducted in April and September of 2009.

Location Type	Number of Samples	Range of Lead Results *(min# to max#)*	Unit of Measure	Number of Exceedances
Plumbing	88	<1 to 11.2	ug/L	1
Distribution	8	<1 to <1	ug/L	0

MAC = Maximum Allowable Concentration
MAC for Lead = 10 ug/L

Location Type	Number of Samples	Range of pH (units) Results *(min# to max#)*	Range of Alkalinity (mg/L) Results *(min# to max#)*
Plumbing	44	7.01 to 7.60	N/A
Distribution	8	7.10 to 7.70	68.7 to 82.5

Sample dates: April 3, 7, 8, 15, September 22, 23, 24 and 25

Summary of Most Recent Schedule 23 Inorganic parameters sampled at the Water Treatment Plant **(sample required every 36 months)**

Parameter	Sample Date	Result Value	Unit of Measure	Standard	Exceedance
Antimony	October 27, 2008	<.5	ug/L	6	No
Arsenic	October 27, 2008	<1	ug/L	25	No
Barium	October 27, 2008	5.2	ug/L	1000	No
Boron	October 27, 2008	2.9	ug/L	5000	No
Cadmium	October 27, 2008	<.1	ug/L	5	No
Chromium	October 27, 2008	4.3	ug/L	50	No
Mercury	October 27, 2008	<.1	ug/L	1	No
Selenium	October 27, 2008	1	ug/L	10	No
Uranium	October 27, 2008	<1	ug/L	20	No

Summary of Most Recent Schedule 24 Organic parameters sampled at the Water Treatment Plant (sample required every 36 months)

Parameter	Sample Date	Result Value	Unit of Measure	Standard	Exceedance
Alachlor	October 27, 2008	<0.41	ug/L	5	No
Aldicarb	October 27, 2008	<0.49	ug/L	9	No
Aldrin + Dieldrin	October 27, 2008	<0.004	ug/L	0.7	No
Atrazine + N-dealkylated metobolites	October 27, 2008	<0.9	ug/L	5	No
Azinphos-methyl	October 27, 2008	<0.3	ug/L	20	No
Bendiocarb	October 27, 2008	<0.97	ug/L	40	No
Benzene	October 27, 2008	<0.25	ug/L	5	No
Benzo(a)pyrene	October 27, 2008	<0.01	ug/L	0.01	No
Bromoxynil	October 27, 2008	<0.68	ug/L	5	No
Carbaryl	October 27, 2008	<0.97	ug/L	90	No
Carbofuran	October 27, 2008	<0.97	ug/L	90	No
Carbon Tetrachloride	October 27, 2008	<0.25	ug/L	5	No
Chlordane (Total)	October 27, 2008	<0.004	ug/L	7	No
Chlorpyrifos	October 27, 2008	<0.3	ug/L	90	No
Cyanazine	October 27, 2008	<0.3	ug/L	10	No
Diazinon	October 27, 2008	<0.3	ug/L	20	No
Dicamba	October 27, 2008	<0.27	ug/L	120	No
1,2-Dichlorobenzene	October 27, 2008	<0.25	ug/L	200	No
1,4-Dichlorobenzene	October 27, 2008	<0.25	ug/L	5	No
Dichlorodiphenyl trichloroethane (DDT) + metabolites	October 27, 2008	<0.005	ug/L	30	No
1,2-Dichloroethane	October 27, 2008	<0.25	ug/L	5	No
1,1-Dichloroethylene (vinylidene chloride)	October 27, 2008	<0.25	ug/L	14	No
Dichloromethane	October 27, 2008	<0.25	ug/L	50	No
2-4 Dichlorophenol	October 27, 2008	<0.051	ug/L	900	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	October 27, 2008	<0.27	ug/L	100	No
Diclofop-methyl	October 27, 2008	<0.27	ug/L	9	No
Dimethoate	October 27, 2008	<0.3	ug/L	20	No
Dinoseb	October 27, 2008	<0.068	ug/L	10	No
Diquat	October 27, 2008	<7.0	ug/L	70	No
Diuron	October 27, 2008	<0.49	ug/L	150	No
Glyphosate	October 27, 2008	<10	ug/L	280	No
Heptachlor + Heptachlor Epoxide	October 27, 2008	<0.004	ug/L	3	No
Lindane (Total)	October 27, 2008	<0.0004	ug/L	4	No
Malathion	October 27, 2008	<0.3	ug/L	190	No
Methoxychlor	October 27, 2008	<0.001	ug/L	900	No
Metolachlor	October 27, 2008	<0.2	ug/L	50	No
Metribuzin	October 27, 2008	<0.2	ug/L	80	No
Monochlorobenzene	October 27, 2008	<0.25	ug/L	80	No
Paraquat	October 27, 2008	<1	ug/L	10	No

Parameter	Sample Date	Result Value	Unit of Measure	Standard	Exceedance
Parathion	October 27, 2008	<0.2	ug/L	50	No
Pentachlorophenol	October 27, 2008	<0.051	ug/L	60	No
Phorate	October 27, 2008	<0.3	ug/L	2	No
Picloram	October 27, 2008	<0.068	ug/L	190	No
Polychlorinated Biphenyls (PCB)	October 27, 2008	<0.0032	ug/L	3	No
Prometryne	October 27, 2008	<0.2	ug/L	1	No
Simazine	October 27, 2008	<0.3	ug/L	10	No
Temephos	October 27, 2008	<14	ug/L	280	No
Terbufos	October 27, 2008	<0.2	ug/L	1	No
Tetrachloroethylene	October 27, 2008	<0.25	ug/L	30	No
2,3,4,6-Tetrachlorophenol	October 27, 2008	<0.051	ug/L	100	No
Triallate	October 27, 2008	<0.2	ug/L	230	No
Trichloroethylene	October 27, 2008	<0.25	ug/L	50	No
2,4,6-Trichlorophenol	October 27, 2008	<0.052	ug/L	5	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	October 27, 2008	<0.066	ug/L	280	No
Trifluralin	October 27, 2008	<0.21	ug/L	45	No
Vinyl Chloride	October 27, 2008	<0.25	ug/L	2	No

Summary of Most Recent Sodium Data tested at the Water Treatment Plant (sample required every 60 months)

Date of Sample	Number of Samples	Result Value	Unit of Measure	Standard	Exceedance
October 11, 2005	1	15000	ug/L	20000	No

Summary of Most Recent Fluoride Data tested at the Water Treatment Plant (sample required every 60 months)

Date of Sample	Number of Samples	Result Value	Unit of Measure	Standard	Exceedance
October 11, 2005	1	<0.1	mg/L	1.5	No

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
No inorganic or organic parameter(s) exceeded half the standard found in Schedule 2 of the ODWS during the reporting period.			

(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) Small Municipal Non-Residential has been removed and Non Municipal Year Round Residential has been added.

VIRGINIATOWN WELL SUPPLY SYSTEM

Large Municipal Residential Drinking Water System

SCHEDULE 22

SUMMARY REPORT FOR MUNICIPALITIES

For the period of

JANUARY 2009 to DECEMBER 2009

Prepared by: The Ontario Clean Water Agency
Prepared for: The Corporation of the Township of McGarry

Schedule 22.
SUMMARY REPORTS FOR MUNICIPALITIES

This report is a summary of water quality information for the **Virginatown Well Supply System.** It is published in accordance with Schedule 22 of Ontario's Drinking Water Systems Regulation 170/03 for the reporting period of January 1, 2009 to December 31, 2009 and must be submitted to members of council.

The report must list the requirements of the Safe Drinking Water Act, its regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any Provincial Officer Order the system failed to meet during the reporting period. The report must also specify the duration of the failure, and for each failure referred to, describe the measures that were taken to correct the failure.

The Safe Drinking Water Act (2002) and the drinking water regulations can be viewed at the following website: http://www.e-laws.gov.on.ca.

To enable the owner of the system to assess the rated capacity of their system to meet existing and future planned water uses, the following information is also required in the report.

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Requirements the System Failed to Meet

The following table lists, to my knowledge any requirements the system failed to meet during the 2009 reporting period.

Drinking Water Legislation	Requirement(s) the System Failed to Meet	Duration	Corrective Actions	Status
Ontario. Regulation 128/04 Section 22	The owner and operating authority of the drinking water system failed to ensure that every operator employed in the subsystem held a certificate applicable to that type of subsystem. On several occasions during the reporting period, non-certified individuals performed daily pumphouse checks, recorded the raw water totalizer flow reading and the daily pump run time hours. Also, the operating authority indicated that during this time the flow data collected by their remote monitoring system was inaccurate and the values collected by the uncertified	January 1, 2009 to July 12, 2009	Only certified operators are conducting checks and recording data as required under the Regulation 170/03. A procedure was developed to ensure that the ORO is kept informed of the qualifications of all operational staff working in the drinking water system. This procedure was reviewed by both municipal and OCWA staff. The procedure is necessary to ensure that uncertified individuals do not perform work required to be done be certified operators.	Complete

	staff were being used to meet the monitoring requirements of the Certificate of Approval and Permit to Take Water.			
Ontario. Regulation 170/03 Subsection 7-5(1)	The owner and operating authority of the drinking water system failed to ensure that a certified operator or water quality analyst conducted every test required by subsection 7-5(1) of Regulation 170/03.	January 1, 2009 to July 12, 2009	Only certified operators are conducting checks and recording data as required under the subsection 7-5(1) of Regulation 170/03.	Complete
Ontario. Regulation 248/03 Subsection 2(2)	The owner and operating authority of the drinking water system failed to ensure that a certified operator or water quality analyst conducted free chlorine residual testing as required by subsection 7-5(1) of Regulation 170/03.	January 1, 2009 to July 12, 2009	Only certified operators are conducting free chlorine residual testing as required under the Regulation 170/03.	Complete
Safe Drinking Water Act Subsection 11(1)3	The owner and operating authority failed to ensure that the drinking water system is operated by persons having the training or expertise for their operating functions that is required by the regulations granted for the system under that Act.	January 1, 2009 to July 12, 2009	Only certified operators are conducting tests and recording data as required under Regulation 170/03.	Complete

Note: These con-compliance issues were forwarded to the Ministry of the Environment's Investigations and Enforcement Branch (IEB) which is responsible for all aspects of environmental enforcement within the ministry.

The IEB conducted a thorough investigation of the violations and concluded that the Municipality took the allegations seriously and responded quickly to ensure compliance and no charges were laid.

Summary of Quantities & Flow Rates

The following tables summarize the quantities and flow rates of water taken and produced during the 2009 reporting period, including average monthly volumes, maximum monthly volumes, total monthly volumes and maximum flow rate.

Raw Water - Monthly Usage for 2009

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date
Average Volume (m^3/day)	639	743	748	709	664	650	661	690	732	746	752	761	708
Maximum Volume (m^3/day)	869	1858	1032	1327	820	812	801	802	848	874	1082	851	1858
Total Volume (m^3)	19809	20810	23178	21277	20575	19506	20504	21405	21947	23123	22560	23583	258278
Maximum Flow Rate (L/min)	1317	1324	1309	1335	1355	1334	1339	1281	1346	1500	1357	1363	1500

Treated Water - Monthly Usage for 2009

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date
Average Volume (m^3/day)	639	743	748	709	664	650	661	690	732	746	752	761	708
Maximum Volume (m^3/day)	869	1858	1032	1327	820	812	801	802	848	874	1082	851	1858
Total Volume (m^3)	19809	20810	23178	21277	20575	19506	20504	21405	21947	23123	22560	23583	258278
Maximum Flow Rate (L/min)	1317	1324	1309	1335	1355	1334	1339	1281	1346	1500	1357	1363	1500

Certificate of Approval #9405-6BTJ8Q requires a sufficient number of flow meters to permit the continuous measurement and recording of the flow rate and daily volume of water into the treatment system and from the treatment system to the distribution system.

The Virginiatown water system has one flow meter installed on the raw water header. This is considered sufficient to satisfy the C of A requirement since there is no water loss from processes between the raw source and the point of discharge of treated water at the tower.

Comparison of Summary to the Rated Capacity & Flow Rates Approved in the Systems Approval

In accordance with section 4.1 of C of A #9405-6BTJ8Q, the Virginiatown Well Supply System shall not be operated to exceed a maximum flow rate of 1420 L/minute into the treatment system.

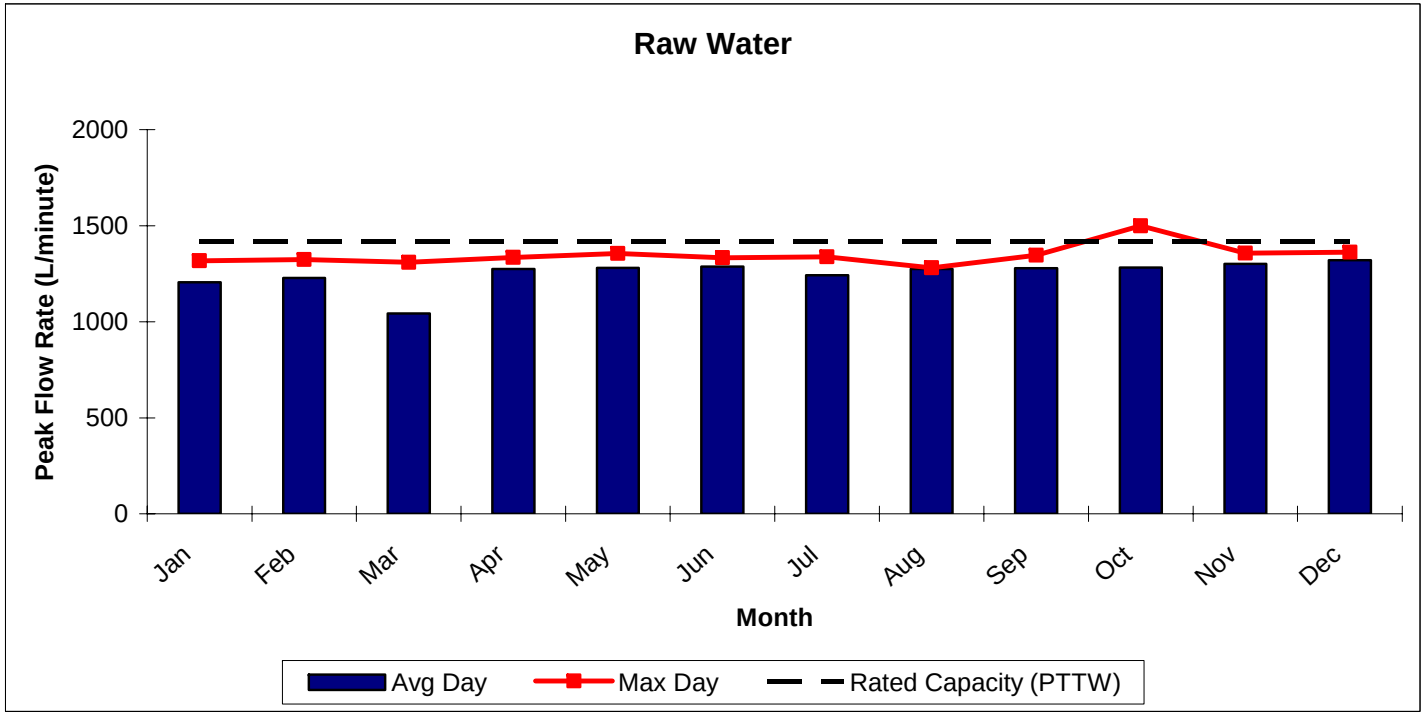
The system exceeded the approved maximum flow rate on one occasion during the reporting period. On October 17th, the maximum peak flow was measured at 1500 L/minute during a well and pump performance assessment. Condition 4.2(i) of the C of A allows the drinking water system to be operated at a rate above the rated capacity where necessary for the maintenance of the drinking water system.

The average flow rate during the reporting period was 708 L/minute.

The following table and graph compares the raw water flows to the approved rated capacity of the system.

2009 Summary of Raw Water Flow Rates
(Raw Water Source: Well #1)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year to Date
Average Flow (L/min)	1205	1228	1042	1274	1280	1287	1243	1275	1279	1282	1302	1320	1251
Maximum Flow (L/min)	1317	1324	1309	1335	1355	1334	1339	1281	1346	1500	1357	1363	1500
Rated Capacity (C of A)	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420	1420
% Rated Capacity	93	93	92	94	95	94	94	90	95	106	96	96	95



Conclusion

The Virginiatown Well Supply System was able to operate in accordance with the terms and conditions of Certificate of Approval # 9405-6BTJ8Q as it met the community's demand for water use.