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GREENBURY

## St. Andrews/Rosedale Distribution System

Certificate of Approval No. 6314-654PDH (Sept. 2004)

Works No. 260001250

- 2010 Summary Report -

Prepared by:


Caneau Water and Sewage Operations Inc.

15005 Parkway Drive,

RR#3 Ingleside, ON

K0C 1M0

Operations Manager:

  
Chris Eamon

L/h at a pressure of 1750 kPa; a 100 L capacity hypochlorite solution tank with spill containment,

- Standby power – provision for connection to portable diesel unit,
- Instrumentation – flow meter and chlorine residual analyzer,

together with all necessary mechanical and electrical work, instrumentation and controls.

The elevated tank is located on the south side of County Road 18. It has a ground elevation of 71.5m. The tower's overflow is at an elevation of 120.3 m. The main water storage cavity is 9.4 m in diameter. It has an effective capacity of 770 m<sup>3</sup>. It is fed and emptied via a 200 mm diameter riser.

The tower is equipped with a Rosemount pressure sensor, which sends signals to the lift station to turn the pumps on or off.

### **Compliance with Terms and Conditions of the Certificate of Approval**

The St. Andrews/Rosedale Distribution System is operated and maintained in accordance with O. Reg. 170/03 (as amended) and Certificate of Approval No. 6314-654PDH dated September, 2004.

The distribution system is operated to treat water at a rate not exceeding the maximum flow rate of 898 m<sup>3</sup>/day. The flows into the treatment system did not exceed the maximum flow rate at any time during the year. The average water taking for the year was 224m<sup>3</sup>/day, 25% of the authorized water taking.

Free chlorine residual in treated water is continuously monitored at the point of entrance into the distribution system. The Prominent chlorine analyzer is accurate to ±2% of the measured value. The online analyzer is monitored, at minimum, every 72 hours. The on-line chlorine analyzer is checked with the hand-held chlorine analyzer and adjusted as required. An alarm system calls out when the chlorine goes below 0.15 mg/L or above 3.50 mg/L. Operators at the St. Andrews Booster Stations try to keep the chlorine residual around 0.80 mg/L. (See Appendix I for flows and average chlorine residual.) The chlorine analyzer was calibrated June 16, 2010 by Ken Harris Instrumentation.

Operators in charge of the St. Andrews Booster Station keep a daily log book recording flow meter readings, free chlorine residual (both continuous and grab samples), and other physical and chemical parameters of the treated water. The booster station is checked (at minimum) every 72 hours.

Samples are collected throughout the year from the treated water to determine whether or not the water is safe for human consumption (in accordance with O. Reg. 170/03, Schedule 10 and 13, Microbiological and Chemical Sampling and Testing). Bacteriological analysis is performed weekly (10 samples per month) on the distribution samples, (representing the water stream from which they are taken) and trihalomethanes are analyzed 4 times a year. (For chemical sampling results see Appendix II – 2010 Annual Report for the Ministry of the Environment.) All samples are analyzed at Caduceon Environmental Labs in Nepean, Ontario. Caduceon and its subcontracted labs are accredited by the Standards Council of Canada. Written procedures have been established for the notification of the Medical Officer of Health and the Ministry of the Environment Spills Action Centre should a sample result indicate an exceedance has occurred.

determine the cause of complaint and the corrective measures taken to alleviate the cause and prevent its reoccurrence.

Caneau Water and Sewage Operations Inc. was granted "Accreditation - Limited Scope – Entire Drinking Water Quality Management System" from the Canadian General Standards Board (CGSB) on October 5, 2010. The CGSB, a federal government organization under Public Works and Government Services Canada has entered into agreement with the Ministry of the Environment (MOE) to provide accreditation services for the purposes of the Municipal Drinking Water Licencing Program. The accreditation of operating authorities is a mandatory requirement of the *Safe Drinking Water Act, 2002*. The MOE requires owners of municipal residential drinking water systems to have an accredited operating authority in place. Full scope accreditation must be applied for within 12 months of the certificate issuance date.

#### **Non-Compliance with Regulatory Requirements and Actions Required**

There were no non-compliance issues identified in the 2010-2011 report dated March 12, 2010 from the Ministry of the Environment.

#### **Maintenance**

- Jan. 15 – replaced UPS (Marleau Mechanical)
- Mar. 25 – filled tower manually for Township to repair leaking valve at fire hall
- Apr. 21 & 22 – Landmark performing tower upgrades
- June 16 – annual calibrations on flow meter and chlorine analyzer – installed new pH probe (Ken Harris Instrumentation)
- Sept. 21 – replaced faulty alarm keypad (Ranguard Security)

# ST. ANDREWS/ROSEDALE DISTRIBUTION SYSTEM SUMMARY REPORT

Municipality: Township of South Stormont  
 Reporting Year: 2010  
 Water Source: St. Lawrence River

Description: Water received from City of Cornwall

Month	Treated Flow			Treated Water Physical/Chemical Parameters				Safe Distribution	Unsafe/Poor Distribution
	Total Flow m <sup>3</sup>	Avg. Day m <sup>3</sup> /day	Max. Day m <sup>3</sup> /day	Free Chlorine Avg. mg/L	Free Chlorine Min. mg/L	Free Chlorine Max. mg/L	THM mg/L		
January	5,760	186	249	0.82	0.47	1.83	0.053	10	
February	5,451	195	356	0.81	0.56	2.43		10	
March	5,877	190	321	0.77	0.50	2.09		10	
April	7,183	239	534	0.75	0.51	2.17		10	
May	8,430	272	408	0.75	0.51	2.51	0.039	10	
June	8,537	285	582	0.75	0.46	2.10		10	
July	9,879	319	816	0.82	0.46	2.95		10	
August	8,409	271	487	0.84	0.37	2.79	0.050	10	
September	5,453	182	279	1.03	0.24	2.70		10	
October	6,328	204	461	0.96	0.39	4.35		10	
November	5,095	170	327	0.91	0.35	2.77	0.045	10	
December	5,288	171	350	0.94	0.55	3.43		10	
Total	81,690							120	
Average	6,808	224		0.85			0.047		
Minimum					0.24				
Maximum			816			4.35			
ODWS							0.100	120	

**APPENDIX II**  
**2010 Annual Report**  
**Ministry of the Environment**



OPTIONAL ANNUAL REPORT TEMPLATE

<b>Drinking-Water System Number:</b>	260001250
<b>Drinking-Water System Name:</b>	St. Andrews/Rosedale Distribution System
<b>Drinking-Water System Owner:</b>	Township of South Stormont
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 1 – December 31, 2010

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></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;"> <p>Township of South Stormont 2 Milles Roches Road Long Sault, ON K0C 1P0</p> </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served:  <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></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; margin: 5px 0;"></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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**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 [ ]



**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**

Water enters from the Cornwall Distribution System at two points, one on Mack Street and one at the corner of Highway 138 and Cornwall Centre Road. Each of these locations contains a metering chamber, which is owned and monitored by the City of Cornwall. In each of these metering chambers, a system of check valves has been installed to prevent backflow into the Cornwall Distribution System.

The re-chlorination booster facility is located on Hwy. 138. The boost pumps installed within the re-chlorination facility have a rated capacity of 10.4 L/s at 12.5 m TDH. The sodium hypochlorite chemical feed system consists of a duplex (duty & standby) chemical metering pump system with automatic switchover and dual injection points. A free chlorine analyzer monitors the free chlorine residual of the discharge side of the boost pumps.

The elevated tank is located on the south side of County Road 18. It has a ground elevation of 71.5m. The tower's overflow is at an elevation of 120.3 m. The main water storage cavity is 9.4 m in diameter. It has an effective capacity of 770 m<sup>3</sup>. It is fed and emptied via a 200 mm diameter riser.

The tower is equipped with a Rosemount pressure sensor, which sends signals to the lift station to turn the pumps on or off.

**List all water treatment chemicals used over this reporting period**

**Sodium Hypochlorite**

**Were any significant expenses incurred to?**

- Install required equipment - No**
- Repair required equipment - No**
- Replace required equipment - No**

**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
15/07/10	Low pressure (watermain break)			Flush and sample	15/07/10

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					
Treated					
Distribution	120	0	0	39	

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	8760	0.24-4.35 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

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				
Nitrite				
Nitrate				

\*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			
Distribution	5	0.00005-0.00024 mg/L	0

**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				
Metribuzin				
Monochlorobenzene				
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls(PCB)				
Prometryne				
Simazine				
THM (NOTE: show latest annual average)		46.7	mg/L	
Temephos				
Terbufos				
Tetrachloroethylene				
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene				
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				



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

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

