

Council Meeting to be held on: Feb. 03, 2014	Submitted by: Rod Tapp Bill Berry <i>RT</i>	For:  Action	Agenda Item #
Subject: Aylmer Water Distribution System Summary & Annual Reports.			

**BACKGROUND:**

The Aylmer Distribution Water System in accordance with the Ontario Drinking Water Systems Regulations is required to complete and publish a Municipal Summary Report and also an Annual Report for the Water System.

As part of this annual process, all members of Council are issued copies of the reports to review, endorse and adopt by resolution prior to being published.

**ANALYSIS:**

Please see copies of the reports attached.

**RECOMMENDATIONS:**

- 1.) That as required by Ontario Regulation 170/03, Schedule 22, Section 22-2, (1)(a), Council receives and approves the Aylmer Distribution System Municipal Summary Report for the year 2013 and furthermore Council also receives and approves the Aylmer Distribution System Annual Report for the year 2013 as required by Ontario Regulation 170/03, Section 11.”
- 2.) The Town posts a copy of the Reports on the Town’s web site and also provides copies available for public viewing at the front counter at Town Hall.
- 3.) The Town forwards a copy of the Aylmer Distribution System Annual Report to the Township of Malahide.

**Town of Aylmer**

**Council Resolution**

Moved By \_\_\_\_\_ Date \_\_\_\_\_

Seconded By \_\_\_\_\_

**“That as required by Ontario Regulation 170/03, Schedule 22, Section 22-2, (1)(a), Council receives and approves the Aylmer Distribution System Municipal Summary Report for the year 2013. Council also receives and approves the Aylmer Distribution System Annual Report for the year 2013 as required by Ontario regulation 170/03, Section 11.”**

**Council authorizes staff to post a copy of the reports on the Town’s website and provide copies available for public viewing at the front counter at Town Hall and furthermore, forward a copy of the Aylmer Distribution Water System Annual Report to the Township of Malahide.**

**Summary Report Requirements**

**Introduction**

The 2013 Summary Report for the Aylmer Distribution System is submitted to satisfy Schedule 22 of Ontario Regulation 170/03. As described in O.Reg 170.03, the report must:

- 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 not met in part a), specify the duration of the failure and the measures that were taken to correct the failure.

The summary report must also include the following information to assist the owner in assessing the capability of the system to meet existing and future uses for 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 results 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, to the flow rates specified in the written agreement.

This report covers the period from January 1, 2013 to December 31, 2013.

**Overview**

The Town of Aylmer is supplied water by the Aylmer Secondary System which delivers water from the Elgin Middlesex Pumping Station to the town limits by means of a 450 mm water main. The Aylmer Distribution System (waterworks #260002136) is classified as a Large Municipal Residential Water System. and operates under Drinking Water Licence #044-101 and Drinking Water Works Permit #044-201.

**Table 1**

Drinking Water Legislation	List of requirements the system failed to meet	Duration of the failure	Measures that were taken to correct problem	Status: (complete or incomplete)
Safe Drinking Water Act				
Ontario Regulations	Exceeded max acceptable stnds as set out by O.Reg 169/03 Sched. 1 -1 E.Coli and 2 Total Coliform at 80 Rutherford Dec 16/13 -3 Total Coliform at 23 Myrtle St Dec 16/13 AWQI# 115369 for both occurences	Original sample was Dec 16/13, Resampled Dec 17 and Dec 18.	Flushed lines and resampled. Tested for free CL2 residual as per Health Unit/MOE directions.	Completed

DWL #044-101. DWWP #044-201 (as of Aug. 4/11)				
Provincial Officer's Order No.				
Works permit/ Licence				

Table 1 lists the requirements that the system failed to meet and the measures taken to correct the failure

### Water Quantity Summary

Table 2 provides an overview of the flows entering the Aylmer Distribution System at Chamber 16 as recorded by the SCADA system.

Table 2

	Total Flow (m3)	Average Daily Flow (m3/day)	Max Daily Flow (m3/day)	Min Daily Flow (m3/day)	Total Reverse Flow (m3)
<b>January</b>	98033	3162	3479	2865	5197
<b>February</b>	87952	3141	4755	2278	4890
<b>March</b>	94923	3062	3484	1874	5007
<b>April</b>	95582	3186	3537	2876	5056
<b>May</b>	110156	3553	4289	2929	5761
<b>June</b>	108053	3601	4421	2959	4749
<b>July</b>	106854	3446	4356	2183	4511
<b>August</b>	120042	3872	4546	3271	4592
<b>September</b>	103607	3453	3984	3016	4145
<b>October</b>	100057	3227	3657	2995	3694
<b>November</b>	92187	2972	3426	2380	3516
<b>December</b>	94052	3033	3466	2397	4119
<b>Total</b>	<b>1211498</b>	<b>3319</b>	<b>4755</b>	<b>1874</b>	<b>55237</b>

Flow data for the period Jan 1, 2013 to Dec 31, 2013

The maximum daily flow to the system occurred on February 9, 2013 with a daily total of 4755 m3. The total flow from the EMPS to Aylmer averaged 3319 m3/day. The numbers change when one takes into account the reverse flow through the meter at Chamber 16. When the reverse flow is subtracted from the total flow, the annual flow drops to 1156261 m3 for the year 2013. This also changes the average daily flow from 3319 to 3167 m3/day for 2013.

Using the figure 130 l/sec as the EMPS pump capacity, the total daily flow for the Aylmer Secondary line is 11232 m3/day. The current average daily flow (3319 m3/day) uses only 29.5 % of the system's capacity. This number is comparable to the previous year's number of 30.5 %

This information is collected in order to assist the owner in assessing the present capacity of the water system. A copy of this report shall be submitted to Council no later than March 31, 2014.



Annual Report - 2013

Drinking-Water System Number:	260002136
Drinking-Water System Name:	Aylmer Distribution System
Drinking-Water System Owner:	The Corporation of the Town of Aylmer
Drinking-Water System Category:	Large Municipal
Period being reported:	January 1, 2013 to December 31, 2013

**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 [ X ] No [ ]

Location where Aylmer Distribution System Annual Report required under O. Reg. 170/03 Schedule 11 will be available for viewing inspection.

Town of Aylmer 46 Talbot St W Aylmer, Ontario N5H 1J7 519-773-3164 www.avlmer.ca
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**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 [ ]

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
Malahide Distribution System -Dingle Street -Talbot Street East	#260004774

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.

- 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**

Treated water is supplied to the Town of Aylmer from the Elgin Water Treatment Plant via the Elgin Area Primary Water Supply System, the Elgin- Middlesex Reservoir, and the Aylmer Secondary System. When required, two pumps, located at the Elgin-Middlesex Pumping Station in St. Thomas, pump water to Aylmer through a 450 mm dia. secondary transmission main (the Aylmer Secondary System). The main leaves the Pumping Station and proceeds along the north side of Hwy #3, through the Municipality of Central Elgin and Malahide Township until it connects to the Aylmer Distribution System at Bodkin Ave. Depending on system pressure and demand, the Secondary System may be used to directly feed the Distribution System or may be used to fill a 4,300 m<sup>3</sup> standpipe located at 23 Myrtle Street. There is a continuous chlorine monitor, a tower level indicator and pressure sensor located at the standpipe.

The Aylmer Distribution System consists of approximately 42 kilometers of water main of varying sizes (50 mm to 450mm) and types (cast iron, ductile iron, DR-18 plastic, transite). There are nine meter chambers, 200 fire hydrants and approximately 347 street valves within the system.

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

Sodium hypochlorite 12% was used to disinfect tools and repair parts for main breaks on St George St, Myrtle St. and Talbot St W and a service leak on Oak St.

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment



[ X ] Replace required equipment

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

Tower upgrades-ladder, climbing equip.....	\$15,264.00
Tower inspection.....	\$3,816.00
Valve maintenance program.....	\$2,172.00

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
Dec 16/13	Total Coliform at 23 Myrtle St	3	cfu/100 ml	flush/resample	Dec 17/13
Dec 16/13	Total Coliform	2	cfu/100 ml	flush /resample	Dec 17/13
	E.Coli Both at 80 Rutherford St	1	cfu/100 ml	flush/resample	Dec 17/13

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	261	0-1	0-3	106	<10 to 190

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 #)	Unit of Measure
Turbidity			
Chlorine	261 grab 8760 at CL17	0.60 to 1.28 0.00 to 2.00	mg/L mg/L
Fluoride (If the DWS provides fluoridation)			

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

**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 #)	Unit of Measure	Number of Exceedances
Plumbing				
Distribution	16	0.08 - 0.60	ug/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				
<b>Parameter</b>	<b>Sample Date</b>	<b>Result Value</b>	<b>Unit of Measure</b>	<b>Exceedance</b>
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				
Polychlorinated Biphenyls(PCB)				
Prometryne				
Simazine				
THM (NOTE: show latest annual average)	2013	24.75	ug/L	0
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