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TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON FEBRUARY 4, 2013
FROM:	JOHN LUCAS, P.ENG. DIRECTOR, WATER AND WASTEWATER AND TREATMENT
SUBJECT:	ANNUAL MINISTRY OF ENVIRONMENT INSPECTION OF THE CITY OF LONDON WATER DISTRIBUTION SYSTEM - 2012

RECOMMENDATION

That, on the recommendation of the Director, Water and Wastewater and Treatment, the 2012 Annual Ministry of Environment Inspection of the City of London Water Distribution System **BE RECEIVED** for information by Municipal Council.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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The following reports can be found on the City of London's website at: <http://www.london.ca/d.aspx?s=/Meetings/Default/meetingpackages.htm>

- *"City of London Water Distribution System 2011 Compliance Report"*, presented to Civic Works Committee on March 05, 2012, Agenda Item #8;
- *"Annual Ministry of Environment Inspection of the City Water Distribution System"*, presented to Civic Works Committee, September 10, 2012, Agenda item #3.

BACKGROUND

Purpose:

The City of London's water distribution system consists of approximately 1,560 kilometres of water mains (up to 1,350 mm diameter), seven pumping stations, three reservoirs, seven emergency standby wells, and a portion of the Elgin-Middlesex Pumping Station (located in St. Thomas). The Ministry of the Environment (MOE) routinely inspects all drinking water systems in Ontario and issues a Drinking Water System Inspection Report. This report outlines the results of the most recent MOE Inspection, conducted on October 22, 2012.

Context:

The MOE has a rigorous and comprehensive inspection program for municipal residential drinking water systems. The objective is to determine whether municipal residential drinking water systems are being operated in accordance with the requirements of the *Safe Drinking Water Act, 2002*, its associated regulations, and MOE-issued Drinking Water Works Permit (DWWP), and Municipal Drinking Water Licence (MDWL). It is the responsibility of each municipal residential drinking water system owner to ensure that their drinking water system is being operated in compliance with all applicable legal requirements.

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MOE annual inspections can be in the form of a comprehensive (thorough) inspection, or a focused (ad hoc) inspection. A focused inspection reviews about one-half of the parameters by reducing their level of emphasis within the module categories. In London's *Drinking Water System Inspection Report*, the MOE stated that the City of London's Water Distribution System was chosen for a focused inspection because:

"...inspection findings over the past three years were such that the number of violations were minimal or non-existent, there were few or no orders issued to you that were of significance in the maintenance of water potability and there were no deficiencies as defined in O. Reg. 172/03."

Generally, this means that the Ministry is satisfied with the ongoing performance of the London water system to the extent that there was a significant reduction in review parameters in 2012 as compared to previous years.

Inspection:

The MOE conducted a focused inspection of the City of London's water system commencing on October 22, 2012. Operational and water quality records from January 1, 2012 through to the inspection date were requested and made available to the MOE Inspector. The inspection included a review of operational procedures, records of water sample analyses, and a review of the status of the certification and training for all of London's Water Operations staff. The Inspector spent several days inspecting the system facilities, reviewing records and interviewing staff.

As part of the annual Drinking Water System Inspection, a *Ministry of the Environment Drinking Water System Inspection Rating Record* is created. Each year these rating records (or "report cards") for drinking water systems across Ontario are compiled and made available to the public. The rating record was developed to encourage continuous improvement by drinking water system operators. The following summarizes London's recent Final Inspection Ratings:

- Yr. 2006 - 95.38%
- Yr. 2007 - 98.19%
- Yr. 2008 - 100.00%
- Yr. 2009 - 100.00%
- Yr. 2010 - 100.00%
- Yr. 2011 - 94.39%
- For Yr. 2012, the City of London achieved a Final Inspection Rating of 95.83%

The Inspection Summary Rating Record is attached as Appendix 'A'. The Drinking Water System Inspection Report can be found at: <http://www.london.ca/d.aspx?s=/Water/default.htm>.

Inspection Results:

The inspection determined that London's water system was being operated in accordance with all applicable regulations. All operators possessed the appropriate Drinking Water Operator Certificates, all regulated water quality sampling during the period of January 1, 2012 through to October 22, 2012 was conducted, and all required reports to the MOE were submitted.

This inspection found one occurrence of non-compliance requiring action by the City of London, which was related to a new procedure that was implemented in 2012. Following the 2011 MOE Inspection, a procedure was introduced requiring that water samples be taken for bacteriological testing whenever a broken water main is repaired, or when a main is cut open for construction activities.

When a bacteriological water sample is collected, it is required that the chlorine concentration of the water be measured and recorded. Of the 145 samples collected under this new procedure, the MOE Inspector determined that the chlorine concentration was not recorded for two of the samples. The Inspector noted this in the Final Report as follows:

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"Two of the many regulated microbiological samples collected as part of maintenance activities on the distribution system did not include the collection of a free chlorine residual. It should be noted that collection of microbiological samples as part of the aforementioned maintenance activities is a new procedure to the City of London, and the two missed free chlorine residual samples simply represent unfamiliarity with the new procedure."

The Inspector also reported the following:

"It should be noted that once notified of this issue, a meeting was held during which the Operators of the distribution system were reminded of the requirement to collect a free chlorine residual sample with all regulated microbiological samples. This non-compliance issue appears to be a minor oversight."




Both of the water samples in question were analyzed at the laboratory providing London with third-party (contracted) services, and no indicators of adverse water quality were detected.

Conclusion:

In the 2012 MOE Inspection of the City of London Water System, one issue of non-compliance was identified, which was characterized as a "minor oversight", with no adverse impact on water quality. As recognized by the Inspector, immediate steps have been taken by Water Operations to make all staff fully aware of the proper procedures, and to ensure that this type of oversight will not be repeated.

Acknowledgements:

This report was prepared with input from Scott Koshowski, P. Eng. - Environmental Services Engineer, and Dan Huggins - Water Quality Manager, of the Water Operations Division.

PREPARED BY:	RECOMMENDED BY:
	
JOHN SIMON, P.ENG. DIVISION MANAGER, WATER OPERATIONS	JOHN LUCAS, P.ENG. DIRECTOR, WATER AND WASTEWATER AND TREATMENT
REVIEWED AND CONCURRED BY:	
	
JOHN BRAAM, P.ENG. MANAGING DIRECTOR, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER	

January 23, 2013
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Attach: Appendix 'A' – Drinking Water Inspection Summary Rating Record

Cc: Roland Welker, Division Manager, Water Engineering
Dan Huggins, Water Quality Manager
Scott Koshowski, Environmental Service Engineer, Water Operations

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Appendix 'A'
Drinking Water Inspection Summary Rating Record

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2012-2013)

DWS Name:	CITY OF LONDON DISTRIBUTION SYSTEM
DWS Number:	260004917
DWS Owner:	London, City Of
Municipal Location:	London
Regulation:	O.REG 170/03
Category:	Large Municipal Residential System
Type Of Inspection:	Adhoc
Inspection Date:	October 22, 2012
Ministry Office:	London District

Maximum Question Rating: 336

Inspection Module	Non-Compliance Rating
Treatment Processes	0 / 56
Distribution System	0 / 21
Operations Manuals	0 / 28
Logbooks	0 / 14
Certification and Training	0 / 28
Water Quality Monitoring	14 / 63
Reporting & Corrective Actions	0 / 70
Treatment Process Monitoring	0 / 56
TOTAL	14 / 336

Inspection Risk Rating	4.17%
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FINAL INSPECTION RATING:	95.83%
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