

**Meeting Date:** March 18, 2019  
**Department:** Engineering & Public Works  
**Prepared By:** Paul Zuberbuhler, Manager of Environmental Services  
**Reviewed By:** George Elliott P.Eng., Director of Engineering & Public Works  
**Reviewed By:** Greg McClinchey, Chief Administrative Officer  
**SUBJECT:** **2018 Water Summary Report – Strathroy-Caradoc Distribution Report No. EPW 19-001**

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## RECOMMENDATION:

It is recommended:

1. That Council receive for information the 2018 Water Summary Report for the Strathroy-Caradoc Distribution System.

## BACKGROUND

Provincial legislation requires the preparation and release of an annual summary report for all public water systems. The report must be submitted to the Ministry of Environment, Conservation and Parks (MECP) prior to March 31<sup>st</sup> of the following year. This requirement applies to the Strathroy-Caradoc Distribution System, which is comprised of the Strathroy and Mt. Brydges area water systems.

The required report is attached for Council's information.

## COMMENTS

The annual summary report is required to publicly identify any non-compliances with the regulations, to provide a summary of quantities and flow rates along with a comparison of flows in relation to rated capacities.

There were no non-compliances identified during the 2018 Annual Inspection by the Ministry of Environment, Conservation and Parks.

The maximum flows for both the Strathroy and Mount Brydges area water systems were within the systems rated capacity. The average daily flow rates were within the rated capacity for Strathroy area water system. For the Mount Brydges area water system, the average flow exceeded the rated capacity for June and July, but the yearly average flow was well within the rated capacity.

A copy of the summary report will be provided to the Township of Adelaide-Metcalfe as required by our water supply agreement.

## **CONSULTATION**

While there is no requirement for formal consultation as part of this annual information report, the CAO and certain members of Departmental staff were involved/informed of this report and the attachment prior to its presentation to the Ministry and Council.

## **FINANCIAL IMPLICATIONS**

There are no direct financial implications related to this report.

## **ATTACHMENTS**

2018 Water Summary Report



**2018 SUMMARY REPORT FOR  
STRATHROY-CARADOC WATER  
DISTRIBUTION SYSTEM**



# 2018 Summary Report for Strathroy-Caradoc Water Distribution System

## Statement of Compliance

This report is a summary of water quality information for the Strathroy-Caradoc Water Distribution System and published in accordance with Schedule 22 of Ontario's Safe Drinking Water Act, Ontario Regulation 170/03 for the reporting period of January 1, 2018 to December 31, 2018. The Strathroy-Caradoc Distribution System is categorized as a Large Municipal Residential Drinking Water System.

The Strathroy-Caradoc Distribution System was operated and maintained in such a manner that the water supplied to the consumers serviced by the system satisfied all the requirements in the Safe Drinking Water Act, the Regulations, the Drinking Water Works Permit Number and the Municipal Drinking Water Licence.

## Description of Water Works

The Strathroy-Caradoc Distribution System is supplied water from the Lake Huron Primary Water Supply System. The Strathroy-Caradoc Distribution System has two connection points to the Lake Huron Primary Water Supply System.

Strathroy is connected at the Lake Huron Primary Water Supply System Monitoring Station #2 located at the Second Street Reservoir. The Strathroy portion of the distribution system consists of the Second Street Pumping Station/Reservoir with re-chlorination and Reservoir (capacity 11,250 m<sup>3</sup>), the Head Street Water Tower (capacity 1,900 m<sup>3</sup>) and over 100 km of watermain serving the local street network.

The following tables provides an overview of storage and pump capacities associated with the Strathroy System

### Water Distribution System Storage Capacity

Site	Capacity (m <sup>3</sup> )
Reservoir Cell #1	3,750
Reservoir Cell #2	3,750
Reservoir Cell #3	3,750
Water Tower	1,900
Strathroy-Caradoc Pipeline In-line Emergency Storage	7,500
Total	20,650

### Water Pumping Station Capacity

Pump #	Capacity (L/s)
P1	80
P2	139
P3	212
P4	39
P5	39

## 2018 Summary Report for Strathroy-Caradoc Water Distribution System

The Strathroy portion of the distribution system services the Municipality of Strathroy-Caradoc and Township of Adelaide-Metcalfe.

Mount Brydges is connected at the Lake Huron Primary Water Supply System Monitoring Station #2 located at the intersection of Springwell Road and Falconbridge Drive. The Mount Brydges portion of the distribution system consists of the Oriole Drive Monitoring Station #3 (re-chlorination), the Glendon Drive Reservoir/Pumping Station (capacity 1639m<sup>3</sup>), the Railroad Street Water Tower (capacity 720m<sup>3</sup>) and over 40km of watermain serving the local street network.

The following tables provides an overview of storage and pump capacities associated with the Mount Brydges System

### Water Distribution System Storage Capacity

Site	Capacity (m <sup>3</sup> )
Reservoir Cell #1	1,639
Water Tower	720
Total	2,359

### Water Pumping Station Capacity

Pump#	Capacity (L/s)
P1	41
P2	60
P3	58
P4	58

The Mount Brydges portion of the distribution system services the Mount Brydges area.

Water Quality information pertaining to the Lake Huron Primary Water Supply System may be obtained from the following web site: [www.huronelginwater.ca](http://www.huronelginwater.ca)

### **Details of non-compliance issues & how any non-compliance issues were corrected**

A Ministry of Environment, Conservation and Parks (MECP) inspection was conducted on November 14<sup>th</sup>, 2018 and the inspection report was received on December 20<sup>th</sup> 2018. There were no non-compliances identified.

### **Details of adverse water quality or potential issues reported as well as how and when any adverse water quality issues were corrected.**

There were two (2) events of adverse water quality or potential for adverse water quality reported in 2018. These were reported to the MECP and the necessary corrective actions were taken. Please see table below that summarizes the events.

## 2018 Summary Report for Strathroy-Caradoc Water Distribution System

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
04-Jul-18	TC/EC	NDOGN/NDOGN	cfu/100mL	Resample	July 5/6, 2018
04-Jul-18	EC	1	cfu/100mL	Resample	July 5/6, 2018
24-Jul-18	TC	3	cfu/100mL	Resample	July 25, 2018

### Summary of the Quantities and Flow Rates of Water Supplied

The following tables summarizes the quantities and totalized volume of water supplied during 2018 in Strathroy and Mt Brydges.

System Capability Assessment			
Comparison of Flow Rates: Strathroy			
Month	Total Flow m <sup>3</sup>	Average Flow m <sup>3</sup> /day	Max Flow m <sup>3</sup> /day
January	103,656	3,344	4,091
February	100,610	3,593	6,813
March	108,150	3,489	4,196
April	105,224	3,507	6,073
May	126,843	4,092	5,808
June	149,284	4,976	5,982
July	162,547	5,243	7,151
August	167,530	5,404	8,015
September	161,950	5,398	9,012
October	148,539	4,792	5,846
November	141,835	4,728	6,299
December	112,182	3,619	5,109
Average Flow	132,362	4,349	6,200
Maximum Flow	167,530	5,404	9,012
Rated Capacity	NA	10,345	18,621
%Capacity	NA	80%	69%
Total Flow	1,588,350	NA	NA

## 2018 Summary Report for Strathroy-Caradoc Water Distribution System

System Capability Assessment			
Comparison of Flow Rates: Mt Brydges			
Month	Total Flow m <sup>3</sup>	Average Flow m <sup>3</sup> /day	Max Flow m <sup>3</sup> /day
January	18,026	581	1,001
February	15,341	548	1,013
March	17,888	577	1,030
April	17,871	596	1,047
May	28,440	917	1,634
June	35,708	1,190	2,274
July	37,787	1,219	2,037
August	24,561	792	1,165
September	23,182	773	1,111
October	19,608	633	979
November	18,084	603	1,030
December	19,854	640	998
Average Flow	23,029	756	1,277
Maximum Flow	37,787	1,219	2,274
Rated Capacity	NA	1,011	2,275
%Capacity	NA	121%	100%
Total Flow	276,350	NA	NA

### Comparison of Actual Flow Rates and Maximum Allowable Rates

The water system's highest daily flow for the Strathroy Area was on September 21<sup>st</sup>, 2018, which was below the maximum rated capacity. The highest daily flow for Mt Brydges Area was on June 17<sup>th</sup> 2018, which was just below the maximum rated capacity. Both of these events occurred during the Fire Departments training events.

The average daily flow for the Strathroy Area was below the average flow rated capacity. The average daily flow for the Mt Brydges Area exceeded the average flow rated capacity in June and July. The average day flow for the year was below the rated capacity.

## 2018 Summary Report for Strathroy-Caradoc Water Distribution System

### Comparison of Current Flow Rates to Historical

The table below shows the average day flow since 2005. The table shows that water usage has been consistent over the last several years

Year	Strathroy Flow (m <sup>3</sup> /day)	Mount Brydges (m <sup>3</sup> /day)	Average Day Flow (m <sup>3</sup> /day)
2005		894	6,554
2006		732	5,795
2007	4,962	748	5,710
2008	4,776	717	5,493
2009	4,597	691	5,288
2010	4,795	727	5,522
2011	4,602	683	5,285
2012	4,845	704	5,549
2013	4,852	663	5,515
2014	4,631	647	5,278
2015	4,380	662	5,042
2016	4,367	714	5,081
2017	4,325	724	5,049
2018	4,349	756	5,105