

February 28, 2020

Jill Bellchamber-Glazier
CAO/Clerk
Municipality of Southwest Middlesex
156 McKeller Street
Glencoe, ON NOL 1M0

Re: Requirement under the Safe Drinking Water Act for a Summary Report

Dear Ms. Bellchamber-Glazier;

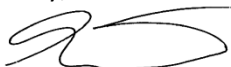
Attached is the 2019 Summary Report for the Southwest Middlesex Distribution System. This report is completed in accordance with Schedule 22 of O. Reg. 170/03, under the Safe Drinking Water Act.

This Summary Report is to be provided to the members of the council. Please ensure this distribution no later than March 31, 2020.

Attached is also a copy of the 2019 Annual Report for the Southwest Middlesex Distribution System required under Section 11 of O. Reg. 170/03. Section 12 of O. Reg. 170/03, requires both the Summary Report and the Annual Report be made available for inspection by any member of the public during normal business hours, without charge. The reports should be made available for inspection at the office of the municipality, or at a location that is reasonably convenient to the users of the water system.

Please feel free to contact me should you require any additional information regarding these reports. I can be reached at 519-312-0847.

Sincerely,



Terri-Lynn Thomson
Process and Compliance Technician

cc. Dale LeBritton OCWA Regional Manager
Sam Smith, OCWA Senior Operations Manager
Cindy Sigurdson, OCWA Safety, Process and Compliance Manager
Greg Storms, Southwest Middlesex



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Annual Summary Report
For the
Southwest Middlesex Distribution System
2019

Prepared for the Municipality of Southwest Middlesex

By the Ontario Clean Water Agency

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2	Compliance with Regulations Schedule 22-2 (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.	1
3	Corrective Actions Schedule 22-2 (2)(b) For each requirement referred to in section 2 that was not met, specify the duration of the failure and the measures that were taken to correct the failure.	2
4	Flow Summary Schedule 22-2 (3) 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.	2
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SECTION 1: Overview of System

This summary report for the Southwest Middlesex Distribution System was published in accordance with Schedule 22 of Ontario's Drinking Water Systems Regulation for the reporting period of January 1st, 2019 to December 31st, 2019. The Southwest Middlesex Distribution System (Waterworks number 260005502) is categorized as a Large Municipal Residential Drinking Water System.

This report was prepared by The Ontario Clean Water Agency on behalf of the Municipality of Southwest Middlesex and must be supplied to the municipal council by March 31, 2020.

SECTION 2: Compliance with Regulations

The Southwest Middlesex Distribution System was operated and maintained in such a manner, and with such facilities that water supplied to the consumers serviced by the system satisfied most of the requirements in the system Municipal Drinking Water Licence 038-101 and Drinking Water Works Permit 038-201, with the exceptions described below.

There were no Ministry of the Environment Conservation and Parks (MECP) Provincial Officer's Orders for this reporting period.

An unannounced MECP inspection was conducted on September 26, 2019 by Meghan Morgan.

The MECP Inspections have an Inspection Rating Record, which evaluates the system to provide information for the owner/operator on areas that need to be improved. The particular areas that were evaluated for the Southwest Middlesex Distribution System were: treatment process, operations manuals, logbooks, certification and training, water quality monitoring, reporting and corrective actions and treatment process monitoring. This system received 21 out of 325 non-compliance ratings and as such received 93.54% for the Final Inspection Rating. Non-compliance with regulatory requirements and actions required as listed in the inspection report:

1. The secondary disinfectant residual was not measured as required for the distribution system. Ontario Regulation 170/03, Schedule 7-2 requires the owner/operating authority of a large municipal residential system that provides secondary disinfection to ensure that at least seven distribution samples are taken each week and tested immediately for free chlorine residual. At least four of the samples must be taken on one day of the week, and at least three samples must be taken on a second day of the week, at least 48 hours after the samples taken on the first day. Although the owner/operating authority for the Southwest Middlesex Distribution System is regularly sampling and testing for free chlorine residual, and the results have all been above the minimum requirement, the sample locations being used for three of the weekly samples is non-compliant. The Regulation defines "distribution samples" as a sample taken in the distribution system or plumbing from a point significantly beyond the point at which drinking water enters the distribution system or plumbing. The operating authority is regularly taking three chlorine residual samples from sample locations at re-chlorination stations, shortly after the water is re-chlorinated. Where there is a re-chlorination station within a system, the required distribution system chlorine residual sampling must be done at locations upstream of the re-chlorination station or significantly beyond the point where water from the station re-enters the distribution system.

Trihalomethanes (THMs) in the distribution system have been an ongoing issue over the last few years with the concentration increasing since 2008. The Ontario Drinking Water Quality Standard for THMs is 100µg/L (based on a running average of four quarterly samples) the Southwest Middlesex Distribution running average is currently 76.25 µg/L. The running average has decreased by 7.2% from 2018. Although not a non-compliance at this time it is a concern and will be closely monitored.

An AWQI occurred on a routine microbiological sample taken on June 24th, 2019 with a result for total coliform and E. coli of NDOGN (No data; total coliform plate overgrown with non-target bacteria).

SECTION 3: Corrective Actions

The non-compliance from the MECP Inspection was addressed by modifying the sample locations. See below for action required as written in the MECP Inspection Report:

This matter was discussed with the operating authority who promptly reviewed all sample locations being used for their distribution samples. Prior to the completion of this report the operating authority had made modifications to the sample locations being used for the collection of distribution samples in accordance with Ontario Regulation 170/03. It is understood that going forward the operating authority will not use the sample locations shortly after rechlorination to fulfill their sampling requirements under the Regulation. No further actions are required for this matter.

The AWQI required corrective action to be taken. Resamples were obtained upstream, downstream and at the source where the adverse occurred for two consecutive days after receiving notification. The results were in compliance limits of 0 cfu/100mL for total coliform and E. coli. All required notifications to the owner, health unit and MECP were conducted in accordance with requirements in O. Reg. 170/03.

SECTION 4: Flow Summary

In accordance with Schedule 22-2(3) 1, find a summary and discussion of the quantity of water supplied during the reporting period. There are no rated capacities specified in the Municipal Drinking Water Licence.

Attached as Appendix A, find a summary of treated water flows including total, average, and maximum daily flows for the reporting period at the Southwest Middlesex Reservoir compared to the previous year's flows. The Municipal Drinking Water Licence does not specify a rated capacity of the Southwest Middlesex Reservoir.

The Southwest Middlesex Reservoir average flow for the reporting period was 1,259 m³/day, which is a 6.4% decrease from 2018. The maximum daily flow for the reporting period was 2,075m³/day.

Attached as Appendix B, find a summary of treated water flows including total, average, and maximum daily flows for the reporting period at the Melbourne Standpipe compared to the previous year. The Municipal Drinking Water Licence does not specify rated capacity of the Melbourne Standpipe.

The Melbourne Standpipe average flow for the reporting period was 96 m³/day, which is an 18.4% decrease from 2018. This decrease is attributed to the Melbourne Standpipe being offline for upgrades. The maximum daily flow for the reporting period was 223m³/day.

Attached as Appendix C, find a summary of treated water flows including total, average and maximum daily flows for the reporting period at the Glencoe Tower. The Municipal Drinking Water Licence does not specify a rated capacity of the Glencoe Tower.

The Glencoe Tower average daily flow for the reporting period was 524m³/day, which is a 17.9% decrease from 2018. The maximum daily flow for the reporting period was 1,019m³/day.

APPENDIX A

The table below is a summary of quantities and flow rates at the Southwest Middlesex Reservoir for 2019 compared to 2018 values.

Month	2019 Total Flow (m ³)	2018 Total Flow (m ³)	2019 Average Day Flow (m ³ /day)	2018 Average Day Flow (m ³ /day)	% Difference between 2019 and 2018	2019 Max Day Flow (m ³ /day)	2018 Max Day Flow (m ³ /day)	% Difference between 2019 and 2018
January	34,717	40,447	1,120	1,305	-14.2	1,475	2,054	-28.2
February	33,558	35,902	1,198	1,282	-6.5	1,568	2,174	-27.9
March	34,147	39,245	1,102	1,266	-13.0	1,454	2,283	-36.3
April	36,003	30,128	1,200	1,004	19.5	1,476	2,267	-34.9
May	37,269	48,517	1,242	1,565	-20.6	1,815	2,717	-33.2
June	43,847	50,116	1,462	1,671	-12.5	1,899	2,701	-29.7
July	46,703	50,296	1,557	1,622	-4.0	2,075	2,266	-8.4
August	43,547	42,678	1,405	1,377	2.0	1,737	2,318	-25.1
September	36,928	44,451	1,231	1,482	-16.9	1,673	2,282	-26.7
October	38,247	37,981	1,234	1,225	0.7	1,748	2,219	-21.2
November	34,714	34,941	1,157	1,165	-0.6	1,292	1,757	-26.5
December	37,316	36,359	1,204	1,173	2.6	1,342	1,596	-15.9
Total Flow	456,996	491,062						
Average			1,259	1,345	-6.4			
Max						2,075	2,717	-23.6

APPENDIX B

The table below is a summary of quantities and flow rates from the Melbourne Standpipe for 2019 compared with 2018 values.

Month	2019 Total Flow (m³)	2018 Total Flow (m³)	2019 Average Day Flow (m³/day)	2018 Average Day Flow (m³/day)	% Difference between 2019 and 2018	2019 Max Day Flow (m³/day)	2018 Max Day Flow (m³/day)	% Difference between 2019 and 2018
January	3,437	3,547	111	114	-3.1	140	168	-17.1
February	2,718	3,201	97	114	-15.1	132	164	-19.9
March	3,064	3,190	99	103	-3.9	118	155	-24.4
April	3,249	2,755	108	95	14.0	145	178	-18.4
May	4,050	3,779	131	122	7.2	223	193	15.4
June	1,282	4,346	128	145	-11.5	148	239	-38.2
July	0	4,073	0	131	-100.0	0	212	-100.0
August	1,997	3,434	111	111	0.2	140	230	-39.3
September	3,441	3,483	115	116	-1.2	150	408	-63.3
October	2,821	3,589	91	116	-21.4	145	147	-1.6
November	2,395	3,550	80	118	-32.5	101	146	-31.2
December	2,517	3,874	81	125	-35.0	95	146	-34.9
Total Flow	30,971	42,820						
Average			96	118	-18.4			
Maximum						223	408	-45.3

APPENDIX C

The table below is a summary of quantities and flow rates from the Glencoe Tower for 2019 compared with 2018 values.

Month	2019 Total Flow (m³)	2018 Total Flow (m³)	2019 Average Day Flow (m³/day)	2018 Average Day Flow (m³/day)	% Difference between 2019 and 2018	2019 Max Day Flow (m³/day)	2018 Max Day Flow (m³/day)	% Difference between 2019 and 2018
January	17,042	20,301	550	655	-16.1	782	926	-15.6
February	15,120	18,267	540	652	-17.2	823	969	-15.1
March	16,294	18,519	526	597	-12.0	643	942	-31.7
April	15,324	20,533	511	684	-25.4	845	1,254	-32.6
May	15,081	21,532	486	695	-30.0	760	1,236	-38.5
June	17,179	20,330	573	678	-15.5	825	1,134	-27.3
July	12,349	25,113	398	810	-50.8	790	1,276	-38.1
August	16,558	23,235	534	750	-28.7	786	1,286	-38.9
September	12,884	14,471	429	482	-11.0	838	1,060	-20.9
October	12,676	16,877	409	544	-24.9	729	1,200	-39.3
November	13,106	16,143	437	538	-18.8	898	726	23.7
December	27,587	17,551	890	566	57.2	1,019	893	14.1
Total Flow	191,201	232,872						
Average			524	638	-17.9			
Maximum						1,019	1,286	-20.8