

**TOWNSHIP OF DAWN-EUPHEMIA
2021
SUMMARY REPORT**

March 25, 2022

Schedule 22 of O. Regulation 170/03 requires that a Summary Report be prepared for each year. It is to be prepared not later than March 31 and given to the members of the municipal council in the case of a drinking water system owned by a municipality. (section 22-2 (1))

The Summary Report must list the requirements of the Act, the regulations, the system's approval, and any order that the system failed to meet at any time during the period covered by the report and specify the duration of the failure. It must also, for each failure referred to above, describe the measures that were taken to correct the failure. (section 22-2 (2))

The Summary Report must also include the following:

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 and daily instantaneous peak flow rates.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval.

This will enable the system's owner to assess the capability of the system to meet existing and planned uses of the system. (section 22-2 (3))

If a report is prepared under subsection 1 for a system that supplies water to a municipality under the terms of a contract, the owner of the system shall give a copy of the report to the municipality by March 31. (section 22-2 (4))



Paul Dalton O.R.O.

SUMMARY REPORT

The following is a summary performance report for the Township of Dawn-Euphemia Water Distribution System. This report is for the year 2021 and is based on Schedule 22 of the O. Regulation 170/03.

2021 Purchase From Enniskillen m3

Month	Marthaville Road	Oil Heritage Road	Black Ash Road	Dawn Valley Road	Mandaumin Road	Cuthbert Road	Monthly Totals
January	2,064	2,058	3,415	33	915	48	8,533
February	2,169	2,278	3,572	35	969	47	9,070
March	2,106	2,138	3,609	20	909	51	8,833
April	2,320	2,250	4,020	27	1,009	51	9,677
May	3,371	2,817	5,494	28	1,418	75	13,203
June	3,608	2,861	6,036	31	1,463	68	14,067
July	2,829	2,436	4,690	4	1,110	105	11,174
August	3,395	2,734	5,530	0	1,298	75	13,032
September	2,770	2,575	4,930	0	989	59	11,323
October	2,409	2,173	3,120	0	920	55	8,677
November	3,024	2,728	4,890	0	1,197	72	11,911
December	2,330	2,231	3,460	0	918	65	9,004
Total	32,395	29,279	52,766	178	13,115	771	128,504

The annual amount of water (m3) purchased from Enniskillen is as follows:

2003	115,191,	2010	109,361	2017	122,359
2004	118,491	2011	108,879	2018	110,980
2005	118,084	2012	111,963	2019	124,913
2006	107,685	2013	107,120	2020	136,957
2007	114,947	2014	117,565	2021	128,504
2008	113,322	2015	113,557	2022	
2009	105,570	2016	124,575	2023	

The total of accounted for water for 2021 was 121,980 m3

This total includes water sold to customers in the Township of Dawn-Euphemia water distribution system and includes an estimate for water uses including fire flow, flushing, etc.

The water loss factor is 5.08 (%)

2004	5.3
2005	4.8
2006	6.2
2007	4.3
2008	5
2009	5
2010	5
2011	8.25
2012	-3.04
2013	7.9
2014	16.1*
2015	9.76
2016	8.04
2017	9.75
2018	8.93
2019	10.83
2020	15.7
2021	5.08

* There was a large undetected service leak which may have contributed for as much as 10 % of the water loss for 2014.

HEALTH SAMPLES

The health samples include tests for the presence of E. coli, total coliforms, and background count. Any presence of E. coli and total coliform or background count > 200 are considered adverse and must be reported.

Free chlorine samples were also analyzed at each site. Sample results more than 0.2 mg/l are of concern and sample results less than 0.05 mg/l are considered adverse and must be reported.

Health samples are taken on a weekly basis at 4 locations within the Township of Dawn-Euphemia water distribution system as follows:

Township Office - Hamlet of Rutherford
Florence Community Centre - Hamlet of Florence
Shetland Library - Hamlet of Shetland
Enbridge Gas - Dawn Plant

An additional alternative sampling site, to be utilized in the event that access is not available to the primary locations is:

The former re-chlorination building at # 1876 Gould Road

Free Chlorine residuals ranged from 0.45 to 1.71 mg/L. Health samples indicated no presence of total coliforms. All health samples for background count were less than 200. The HPC ranged from <10 to 10.

OTHER SAMPLING

Quarterly trihalomethane samples are required to be taken in the water distribution system. The ODWQS for Trihalomethanes (THM) is 100 ug/l. Trihalomethanes are formed by the reaction of chlorine with organic matter in the water. Samples are usually taken in the remote part of the water system where they are most likely to develop.

Trihalomethane samples were taken in 2021. Two samples taken in the water distribution system was above the required limits (25 ug/l to 44 ug/l). The results were .59 and .76 ug/l.

CHEMICALS USED IN TREATMENT PROCESSES

There were no chemicals used in the Dawn-Euphemia Water Distribution System in 2021. A 12% chlorine solution of sodium hypochlorite is used at the Enniskillen Water Reservoir and Pumping Station upstream of the water system.

EMERGENCY OR UPSET CONDITIONS

An emergency or upset condition would be a circumstance where the quality of water was threatened.

There were no circumstances that Total Coliforms were present.

REVIEW OF WATER DISTRIBUTION SYSTEM

Lead and alkalinity sampling were carried out in the water distribution system in the spring and fall of 2021. All sampling results were within acceptable levels.

WATERLINE CONSTRUCTION AND MAINTENANCE

March 2/21 - Petrolia Water Distribution Advisory Committee Meeting

March 31/ 21 - Risk Assessment Review Meeting

March 31 / 21 - Flush Mainlines on Esterville Road, between Lambton and Bentpath Lines, prior to implementation.

April 8/21 - Lead and Alkalinity tests.

May 7 /21 - Off-Site Audit, James Pang

May 11 -13, and 26 / 21 -Hydrants and blowoffs flushed and tested.

June 7/21 - Repair service line, 5283 Bentpath Line.

June 16 / 21 - Replaced Service Meter @ 1122 Shetland Road

July 20 / 21 - Cycle and exercise all mainline valves in System

August 6 / 21 - Superchlorinate and pressure test mainline extension Inwood Road

August 10 / 21 - Bacteriological samples taken @ 1447 Inwood Road, (termination point of mainline).

August 23 - 24/21 - Tie - in and flush new mainline extension to 1447 Inwood Road.

August 23 / 21 - All Supervision for mainline extension to 1447 Inwood Road, completed by Municipal Staff.

September 14/21 M.O.E. Inspection (online).

October 4 / 21 - Lead and Alkalinity samples.

November 18 / 21 - Hydrants and blowoffs flushed and tested.

November 22 / 21 - Repair leaking valve SE corner of Fansher Road and Shetland Road.

November 25 / 21 - Emergency exercise.

December 16 /21- Replace service meter 5825 Langbank Line.

As per section 22-2 (2) of O. Regulation 170/03, the list of requirements of the Act, the regulations, the system's approval, and any order that the system failed to meet at any time during 2021 including the duration of the failure must be included in the Summary report.

There were no times that the System failed to meet the requirements of the Act.

RECOMMENDED WORK

1) The Municipality has located the waterline system with Global Positioning to be retained, and utilized for locating. Appurtenances to the system will be mapped in the future.

2) The Municipality will be replacing all meters, and installing a remote reading system, a "Radio Read System", which will no longer require access to the property, but can be read by driving by at the roadway frontage.

This process was delayed for 2020 and only absolute non working meters were replaced, and new installations were implemented in 2021 due to restrictions based on health concerns due to the Coronavirus Pandemic. It is anticipated to commence the replacements within any restriction guidelines during 2022.