

TOWNSHIP OF DAWN-EUPHEMIA
2023
SUMMARY REPORT

March 18, 2024

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))

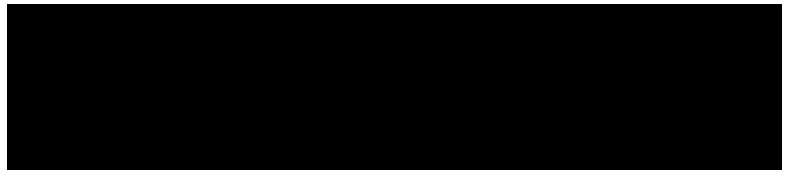
The Summary Report must list the requirements of the Act, the regulations, the system's approval, and any order that the system failed to meet at any time during the period covered by the report and specify the duration of the failure. It must also, for each failure referred to above, describe the measures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



SUMMARY REPORT

The following is a summary performance report for the Township of Dawn-Euphemia Water Distribution System. This report is for the year 2023 and is based on Schedule 22 of the O. Regulation 170/03.

2023 Purchase From Enniskillen 137,898 m3

Month	Marthaville Road	Oil Heritage Road	Black Ash Road	Dawn Valley Road	Mandaumin Road	Cuthbert Road	Monthly Totals
January	3,993	2,581	3,992	0	909	50	11,525
February	3,603	1,735	3,125	0	678	50	9,191
March	3,947	2,090	3,431	0	818	60	10,346
April	2,890	1,915	3,612	0	845	40	9,302
May	3,410	2,920	5,697	0	1,381	80	13,488
June	4,004	2,490	4,843	0	1,124	50	12,511
July	2,845	1,944	4,560	0	977	35	10,361
August	4,265	3,114	4,430	2	655	50	12,516
September	4,660	2,822	5,239	0	1,354	34	14,109
October	5,030	2,960	5,633	85	1,472	86	15,266
November	3,890	2,277	3,748	30	887	52	10,884
December	3,133	1,797	2,744	60	623	42	8,399
Total	45,670	28,645	51,054	177	11,723	629	137,898

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	131,929
2009	105,570	2016	124,575	2023	137,898

The total of accounted for water for 2023 was 132,084 m3 through meters and 2,000m3 flushing/fire = 134,084m3

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 (2,000m3).

The water loss factor is 2.77 (%)

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
2022	13.5
2023	2.77

* 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 0.50 to 1.73 mg/L. Health samples indicated 1 positive test for total coliforms. Resamples conducted indicated no total coliforms were present. Issue was OCWA operator error. All health samples for background count were less than 200. The HPC ranged from <10 to 20cfu/1ml.

OTHER SAMPLING

Quarterly trihalomethane samples are required to be taken in the water distribution system. The RAA (running annual average) for Trihalomethanes (THM) must not exceed 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.

Quarterly Trihalomethane samples were taken in 2022. Results were 51, 43, 65 and 82ug/L. The 2023 RAA was (51+43+65+82) divide by 4 = 60.25ug/L.

CHEMICALS USED IN TREATMENT PROCESSES

There were no chemicals used in the Dawn-Euphemia Water Distribution System in 2023. 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 was one circumstance that Total Coliforms were present. Resampling indicated that levels were nil. Contamination during sampling was suspected.

REVIEW OF WATER DISTRIBUTION SYSTEM

Lead and alkalinity sampling were carried out in the water distribution system in the spring and fall of 2023. All sampling results were within acceptable levels.

WATERLINE CONSTRUCTION AND MAINTENANCE

Apr 4/23 - Lead and Alkalinity tests.

Apr 5/23 - 4" Valve repair 1387 Mandaumin Rd

Apr 11/23 - Risk Assessment Review Meeting

Apr 13/23 - Emergency Control Group Exercise - Significant Weather Event

Apr 19/23 - Off-Site Inspection with James Pang (DWQMS)

Apr 25/23 - Petrolia Water Distribution Annual Advisory Committee Meeting

May 8-9, 11-12, 15-16 & 25-26/23 - Hydrants and blowoffs flushed and tested.

May 16-17, 19 & 23-24/23 - Cycle and Exercise all Mainline Valves in System

May 17 /23 M.O.E. Inspection On-Site

Jun 2/23 - New 1" Water Service Line 6552 Bilton Line. Main tapped Nov 9/22.

Jul 11/23 - 2 Master Meter Head replacements. SW Corner of Marthaville Road & Aberfeldy Line and Cuthbert Road & Aberfeldy Line

Oct 2 / 23 - Lead and Alkalinity samples.

Oct 10-13, 17-18, 31 & Nov 14/23 - Hydrants and blowoffs flushed and tested

Oct 17 / 23 - Adverse quality water indicator OCWA sample with a Total Coliform

Oct 20 / 23 - OCWA re-sample for Total Coliform - Result No Total Coliforms

Oct 20/23 - Meter installed on hydrant at Dawn Valley Road & Bentpath Line for Enbridge usage was 1,693m³

Oct 26/23 - New 1" Water Service Line 856 Dawn Valley Road

Oct 30/23 - 3/4" Emergency water service repair 1993 Oil Heritage Road.

Nov 15/23 - New 1" water service 1321 Tinney Road.

Nov 29/23 - LAWSS Emergency Control Group Exercise hosted by Enniskillen Twp.

Nov 30/23 - New 3/4" water service 551 George Street.

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 2023 including the duration at 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. Constant updates are ongoing as needed. 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. As of Dec 31 2023, 80% of residential meters have been installed. Remaining meters replacements have commenced in 2024 will the goal of having all residential meters replaced by end of year 2024.