

Municipality of North Perth
2020 Summary Report
For the
Listowel Drinking Water System

DWS Name: Listowel Drinking Water System
DWS #: 220000512
Category: Large Municipal Residential
Reporting Year January 1 – December 31, 2020

Date Prepared: January 27th, 2021

On June 1, 2003, the Safe Drinking Water Act and supporting regulations came into force in the Province of Ontario. As part of the requirements of Section 22-2 of O. Reg. 170/03, Drinking Water Systems Regulation of the *Safe Drinking Water Act, 2002*, a Summary Report must be given to members of the municipal council by March 31st of each year. According to the regulations, the Summary Report must:

“(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; and

(b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

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.”

This report was prepared to meet the above requirements.

In operating water systems, the Municipality of North Perth makes every effort to ensure that it complies with all applicable laws, regulations, operating procedures and generally accepted industry practices. Best efforts have been made to comply with all of the terms and conditions of the Safe Drinking Water Act, its regulations, approvals and orders.

We have conducted a search and review of the records relating to the operation of the system and to the best of our knowledge, the following report truthfully and accurately reflects any and all matters of non-compliance regarding the ownership and operation of the Facility during the reporting period.

A. System Description

The Listowel Drinking Water System consists of three (3) ground water wells automatically controlled by a Supervisory Control and Data Acquisition (SCADA) system. System pressure is maintained by the water tower located at 580 Main St. West. Predetermined water level set points automatically start and stop the well pumps. Two chemical feed pumps at each well also start automatically adding sodium hypochlorite and sodium silicate to the water.

The first chemical added is sodium hypochlorite (liquid chlorine). It is used to kill any disease-causing organisms (disinfect) that may be present in the water. It is important to add enough of this chemical to maintain a free chlorine residual throughout the water distribution system. The second chemical added is Sodium Silicate. It is used as a sequestering agent to prevent iron from oxidizing thereby minimizing the amount of rust formation in the water.

B. Non-Compliance with Legislations, Regulations, Approvals & Orders

The Listowel Drinking Water System is governed by, and must operate in accordance with, the following Acts and Regulations:

- Safe Drinking Water Act 2002;
 - O. Reg 128/04 – Certification of Drinking Water System Operators
 - O. Reg 170/03 – Drinking Water Systems
 - O. Reg 169/03 – Ontario Drinking Water Quality Standards
- Environmental Protection Act, where applicable;
- Clean Water Act, where applicable;
- Municipal Drinking Water Licence - 091-103;
- Drinking Water Works Permit - 091-203;
- Permit to Take Water – 6463-8NWM5A.

During this period, the Facility was operated in full compliance with the Act, the regulations and the Facility’s licence and permit. An annual inspection by the Ministry of Environment, Conservation and Parks was not performed during the reporting period.

Requirement	Duration of Failure	Measures to Correct the Failure

C. System Capability

Comparison of Flow Rates

Well 4						
Month	Average Flow (m ³ /d)	Maximum Flow (m ³ /d)	Total Monthly Flow (m ³)	Maximum Flow Rate (L/min)	System Capacity	Approved Flow Rate
January	649.52	812.47	20135.07	1847.42	3,273.1 m ³ /day	2,273 L/min
February	604.11	700.63	17519.17	1860.16		
March	616.76	716.90	19119.65	1864.31		
April	616.59	700.64	18497.70	1846.58		
May	701.95	963.63	21760.31	1880.62		
June	747.75	964.35	22432.41	1881.39		
July	802.41	1140.56	24874.60	1946.53		
August	719.28	860.78	22297.70	1912.38		
September	696.94	825.25	20908.07	1841.74		
October	932.04	1351.00	28893.17	1879.42		
November	1039.04	1278.60	31171.09	1880.73		
December	1030.80	1294.80	31954.80	1870.47		
Average	763.10		23296.98	1875.98		
Maximum		1351.00	31954.80	1946.53		
% of Capacity	23.31	41.28				

Well 5						
Month	Average Flow (m³/d)	Maximum Flow (m³/d)	Total Monthly Flow (m³)	Maximum Flow Rate (L/min)	System Capacity	Approved Flow Rate
January	648.89	823.52	20115.73	1896.48	3,273.1 m ³ /day	2,273 L/min
February	631.65	878.34	18317.91	1896.52		
March	613.99	714.77	19033.75	1898.07		
April	614.92	710.96	18477.50	1870.65		
May	694.64	964.00	21533.90	1868.32		
June	823.03	1223.40	24690.90	1814.88		
July	828.06	1139.10	25669.90	1812.82		
August	733.05	868.10	22724.50	1811.91		
September	703.52	838.00	21105.50	1812.35		
October	378.50	1396.00	11733.60	1813.46		
November	0	0	0	0		
December	0	0	0	0		
Average	555.85		16950.27	1541.29		
Maximum		1396.00	25669.90	1898.07		
% of Capacity	16.98	42.65				

Well 6						
Month	Average Flow (m³/d)	Maximum Flow (m³/d)	Total Monthly Flow (m³)	Maximum Flow Rate (L/min)	System Capacity	Approved Flow Rate
January	648.67	813.89	20198.71	1851.88	3,273.1 m ³ /day	2,273 L/min
February	614.20	706.11	17811.71	1880.99		
March	623.37	716.10	19324.34	1874.96		
April	619.71	710.50	18591.39	1874.02		
May	693.58	991.93	21501.02	1919.98		
June	820.15	1230.54	24604.51	1932.58		
July	827.90	1141.04	25664.78	1891.20		
August	739.23	864.80	22916.07	1885.12		
September	708.24	841.39	21247.08	1884.03		
October	933.48	1392.22	28937.93	1878.49		
November	1039.88	1283.10	31196.40	1819.55		
December	1084	1343.00	33627.58	1987.43		
Average	785.83		23801.79	1890.02		
Maximum		1392.22	33627.58	1987.43		
% of Capacity	24.01	42.54				

LISTOWEL WELL SUPPLY – ALL WELLS					
Month	Average Flow (m³/d)	Maximum Flow (m³/d)	Total Monthly Flow (m³)	System Capacity	Approved Flow Rate
January	1947.08	2449.38	60359.51	9,819 m ³ /day	Well 4: 2,273 L/min Well 5: 2,273 L/min Well 6: 2,273 L/min
February	1849.96	2269.38	53648.79		
March	1854.12	2147.77	57477.74		
April	1851.22	2098.54	55536.59		
May	2090.17	2919.56	64795.23		
June	2390.93	2913.74	71727.82		
July	2478.36	3420.70	76209.28		
August	2191.56	2593.68	67938.27		
September	2108.65	2467.41	63260.65		
October	2244.02	4139.22	69564.70		
November	2078.92	2561.70	62367.49		
December	2115.56	2637.80	65582.38		
Average	2100.05		64039.04		
Maximum		4139.22	76209.28		
% of Capacity	21.38	42.16			