

DWCo. LTD

Dufferin Water Co. LTD
13 Rose Ridge Lane
Mono On
L9W 5Y3

Phone 519 942 5695 Fax 519 940 3956

22 February 2021

Township of Mulmur
RR #2
Lisle, ON
LOM 1M0

Attn: John Wimetts, Director of Public Works

Re: Mansfield Water System – Annual Summary Report for 2020

Dear John:

Attached is the 2020 Summary Report for the Mansfield Water System. This report was prepared by Dufferin Water Co. Ltd on behalf of the Township of Mulmur in accordance with Schedule 22 of O. Reg 170/03 filed under the Safe Drinking Water Act (SDWA).

The summary report is required to be prepared, not later than March 31 of each year for the preceding calendar year and given to the members of the municipal council; please ensure this distribution.

Also attached to this letter is a copy of the 2020 Annual Report for the Mansfield Water Supply System. This report should be made available to the public at the Municipal office and if possible on the township website.

If you have any questions regarding either report please call.

Regards,



Joe Miedema P. Eng.
General Manager

Mansfield Water System Large Municipal Residential Drinking Water System

Schedule 22 Summary Report

**For the Period:
January 01, 2020 to December 31, 2020**

**Prepared for the Township of Mulmur
By Dufferin Water Co. Ltd**

Introduction

Schedule 22 of O. Reg 170/03 requires the preparation by the water system owner of a "Summary Report for Municipalities." This requirement only applies to large and small municipal residential systems. The Mansfield Water System is classified as a Large Municipal Residential Drinking Water System.

The Summary Report for the preceding year is to be issued by March 31 of the following year. This report was prepared by Dufferin Water Co. Ltd on behalf of the Township of Mulmur.

Distribution of the Summary Report is the responsibility of the owner. For a municipality that owns the water supply, all members of council are to receive the report. If the water system is owned by a municipal service board established under Section 195 of the Municipal Act, 2001 then all members of that board are to receive the report. Finally, if a water supply provides water to another municipality under contract, then the water supply owner shall, give by March 31 a copy of the Summary Report to the Municipality being supplied.

The contents of the Summary Report for the municipality must include the following:

1. A list of the requirements of the Safe Drinking Water Act and its regulations that the water system failed to meet during the reporting period, including the duration of the failure.
2. A list of the requirements of the water system's Certificate of Approval that the water system failed to meet during the report period, including the duration of the failure.
3. A list of any Orders that the water system failed to meet during the report time frame, including the duration of the failure.
4. For each of the above failures, a description of the measures taken to correct the failure.
5. A summary of the quantities and flow rates of water supplied "including monthly average, maximum daily flows, and daily instantaneous peak flow rates." (*Information is to enable the owner to assess the capability of the water system to meet existing and future demand*).
6. A statement that captures the comparison of the flow information to the rated capacity and flow rates stated in the water supply's approval.

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Issues of Non-Compliance

The following table lists the requirements of the Act, Regulations, System Approval (s) and any order that the system failed to meet at any time during the reporting period and measures taken to correct each failure:

Drinking Water Legislation	Requirements the system failed to meet	Duration	Corrective Action(s)	Status
Not Applicable				

Assessment of System Flows and Rates of Water Taking

The following tables list the quantities and flow rates of the water supplied during this reporting period, including monthly average and maximum daily flows, daily instantaneous peak flow rates and a comparison to the rated capacity and flow rates specified in the system approval:

Well Number One

Approved Daily Volume: 326.88 cubic metres

Approved Flow Rate: 227 litres/minute

Month	Average Daily Volume (m ³)	Percent Of Approved Volume	Maximum Daily Volume (m ³)	Percent Of Approved Volume
January	123	38%	209	64%
February	122	37%	178	54%
March	127	39%	163	50%
April	177	54%	302	92%
May	143	44%	241	74%
June	102	31%	145	44%
July	99	30%	208	64%
August	95	29%	185	57%
September	103	31%	171	52%
October	85	26%	159	49%
November	90	27%	136	42%
December	129	39%	217	66%

Flow control is in the form of a pressure reducing valve that is equipped to open and close when the well pump is energized. The valve limits the flow of water from the well and prevents the pump from exceeding the permitted flow rates. Average flow rate when this well is operating is 204 litres per minute.

Well Number Two

Approved Daily Volume: 262.08 cubic metres

Approved Flow Rate: 182 litres/minute

Month	Average Daily Volume (m ³)	Percent Of Approved Volume	Maximum Daily Volume (m ³)	Percent Of Approved Volume
January	35	13%	56	21%
February	37	14%	53	20%
March	38	15%	49	19%
April	53	20%	94	36%
May	44	17%	74	28%
June	32	12%	45	17%
July	31	12%	70	27%
August	29	11%	59	23%
September	32	12%	53	20%
October	26	10%	49	19%
November	28	11%	42	16%
December	40	15%	67	26%

Flow control is in the form of a pressure reducing valve that is equipped to open and close when the well pump is energized. The valve limits the flow of water from the well and prevents the pump from exceeding the permitted flow rates. Average flow rate when this well is operating is 108 litres per minute

Well Number Three

Approved Daily Volume: 362.88 cubic metres

Approved Flow Rate: 252 litres/minute

Month	Average Daily Volume (m ³)	Percent Of Approved Volume	Maximum Daily Volume (m ³)	Percent Of Approved Volume
January	0	0%	0	0%
February	0	0%	0	0%
March	0	0%	0	0%
April	0	0%	0	0%
May	0	0%	0	0%
June	0	0%	0	0%
July	0	0%	0	0%
August	0	0%	0	0%
September	0	0%	0	0%
October	0	0%	0	0%
November	8	2%	155	43%
December	8	2%	199	55%

Flow control is in the form of a pressure reducing valve that is equipped to open and close when the well pump is energized. The valve limits the flow of water from the well and prevents the pump from exceeding the permitted flow rates. Average flow rate when this well is operating is 246 litres per minute

Distributed Water

Approved Daily Volume: 951.8 cubic metres

Approved Flow Rate: 661 Litres per minute

Month	Average Daily Volume (m ³)	Percent Of Approved Volume	Maximum Daily Volume (m ³)	Percent Of Approved Volume
January	158	17%	254	27%
February	160	17%	224	24%
March	166	17%	212	22%
April	232	24%	382	40%
May	186	20%	316	33%
June	134	14%	234	25%
July	131	14%	279	29%
August	124	13%	192	20%
September	135	14%	210	22%
October	111	12%	202	21%
November	119	12%	157	16%
December	168	18%	252	26%

Flow control is in the form of a pressure reducing valve located on the discharge side of each pressure pump. These valves limit the flow of treated water and prevents the distribution flow rate from exceeding the permitted flow rates. Average flow rate when pumps are operating is 330 litres per minute.

OPTIONAL ANNUAL REPORT TEMPLATE

Drinking Water System Number:	260063661
Drinking Water System Name:	Mansfield Well Supply
Drinking Water System Owner:	Township of Mulmur
Drinking Water System Category:	Large Municipal Residential
Period being reported:	January 01, 2020 to December 31, 2020

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking Water System serve more than 10,000 people? Yes [] No <input checked="" type="checkbox"/></p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes <input checked="" type="checkbox"/> No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Report is available for inspection at the municipal office in Terra Nova</p> </div>	<p><u>Complete for all other Categories</u></p> <p>Number of Designated Facilities served:</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">N/A</div> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Number of Interested Authorities you report to:</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;">N/A</div> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes <input type="checkbox"/> No <input type="checkbox"/></p>
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Note: For the following tables below, additional rows or columns may be added, or an appendix may be attached to the report

List all Drinking Water Systems (if any), which receive all their drinking water from your system:

Drinking Water System Name	Drinking Water System Number
N/A	

Did you provide a copy of your annual report to all Drinking Water System owners that are connected to you and to whom you provide all drinking water? Yes [] No []

Indicate how you notified system users that your annual report is available and is free of charge.

- ☒ Public access/notice via the web
☐ Public access/notice via Government Office
☐ Public access/notice via a newspaper
☐ Public access/notice via Public Request
☐ Public access/notice via a Public Library
☐ Public access/notice via other method _____

Describe your Drinking Water System

Water System is classified as a Large Municipal Residential Water System that currently serves approximately 153 service connections. The system is owned by the Township of Mulmur and operated by Dufferin Water Co. Ltd. Water is supplied via three municipal wells, a standpipe and a pumphouse. Inspection, maintenance and sampling are conducted on a regular basis in accordance with Ontario Regulation 170/03 to ensure the safety of the water supply

List all water treatment chemicals used over this reporting period

12 % Sodium Hypochlorite

Were any significant expenses incurred to?

- ☐ Install required equipment
☐ Repair required equipment
☒ Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

Replace Well 3 with new drilled well. +/- \$40,000

Provide details on the notices submitted in accordance with subsection 18 (1) of the Safe Drinking Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
N/A					
N/A					

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period

		Number of Samples	Range of E. Coli Results (min#)-(max#)	Range of Total Coliform Results (min#)-(max#)	Number of HPC Samples	Range of HPC Results (min#)-(max#)
Raw		112	0 to 0	0 to 4	1	0 to 2
Treated		52	0 to 0	0 to 0	52	0 to 0
Distribution		116	0 to 0	0 to 0	52	0 to 3

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min#)-(max#)	Unit of Measure
Turbidity	26	0.11-0.62	NTU
Chlorine	8760	1.42-2.47	Mg/L
Fluoride (If the DWS provides fluoridation)	N/A	N/A	N/A

NOTE: For continuous monitors use 8760 as the number of samples

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
N/A				
N/A				

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	May 23/18	ND	ug/L	No
Arsenic	May 23/18	ND	ug/L	No
Barium	May 23/18	8.2	ug/L	No
Boron	May 23/18	36	ug/L	No
Cadmium	May 23/18	ND	ug/L	No
Chromium	May 23/18	ND	ug/L	No
*Lead	N/A	N/A	N/A	N/A
Mercury	May 23/18	ND	ug/L	No
Selenium	May 23/18	ND	ug/L	No
Sodium	May 23/18	15	mg/L	No
Uranium	May 23/18	ND	ug/L	No
Fluoride	May 23/18	0.1	mg/L	No
Nitrite	Dec 10/20	ND	mg/L	No
Nitrate	Dec 10/20	2.16	mg/L	No

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting

period (applicable to the following drinking water systems: large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#)–(max #)	Unit of Measure	Number of Exceedances
Plumbing	N/A	N/A	N/A	N/A
Distribution	2	ND	Ug/L	0

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	May 23/18	ND	ug/L	No
Atrazine + N-dealkylated metabolites	May 23/18	ND	ug/L	No
Azinphos-methyl	May 23/18	ND	ug/L	No
Benzene	May 23/18	ND	ug/L	No
Benzo(a)pyrene	May 23/18	ND	ug/L	No
Bromoxynil	May 23/18	ND	ug/L	No
Carbaryl	May 23/18	ND	ug/L	No
Carbofuran	May 23/18	ND	ug/L	No
Carbon Tetrachloride	May 23/18	ND	ug/L	No
Chlorpyrifos	May 23/18	ND	ug/L	No
Diazinon	May 23/18	ND	ug/L	No
Dicamba	May 23/18	ND	ug/L	No
1,2-Dichlorobenzene	May 23/18	ND	ug/L	No
1,4-Dichlorobenzene	May 23/18	ND	ug/L	No
1,2-Dichloroethane	May 23/18	ND	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	May 23/18	ND	ug/L	No
Dichloromethane	May 23/18	ND	ug/L	No
2,4-Dichlorophenol	May 23/18	ND	ug/L	No
2,4-Dichlorophenoxyacetic acid (2,4-D)	May 23/18	ND	ug/L	No
Diclofop-methyl	May 23/18	ND	ug/L	No
Dimethoate	May 23/18	ND	ug/L	No
Diquat	May 23/18	ND	ug/L	No
Diuron	May 23/18	ND	ug/L	No
Glyphosate	May 23/18	ND	ug/L	No
HAAs (Note: show latest running annual average)	2020	ND	ug/L	NO
Lindane (Total)	May 23/18	ND	ug/L	No
Malathion	May 23/18	ND	ug/L	No
Metolachlor	May 23/18	ND	ug/L	No
Metribuzin	May 23/18	ND	ug/L	No
Monochlorobenzene	May 23/18	ND	ug/L	No

Paraquat	May 23/18	ND	ug/L	No
Pentachlorophenol	May 23/18	ND	ug/L	No
Phorate	May 23/18	ND	ug/L	No
Picloram	May 23/18	ND	ug/L	No
Polychlorinated Biphenyls (PCB)	May 23/18	ND	ug/L	No
Prometryne	May 23/18	ND	ug/L	No
Simazine	May 23/18	ND	ug/L	No
Terbufos	May 23/18	ND	ug/L	No
Tetrachloroethylene (perchloroethylene)	May 23/18	ND	ug/L	No
2,3,4,6-Tetrachlorophenol	May 23/18	ND	ug/L	No
THMs (Note: show latest running annual average)	2020	10.62	ug/L	NO
Triallate	May 23/18	ND	ug/L	No
Trichloroethylene	May 23/18	ND	ug/L	No
2,4,6-Trichlorophenol	May 23/18	ND	ug/L	No
Trifluralin	May 23/18	ND	ug/L	No
Vinyl Chloride	May 23/18	ND	ug/L	No
MCPA	May 23/18	ND	ug/L	No

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards

Parameter	Result Value	Unit of Measure	Date of Sample
Sodium	15	Mg/L	May 23/18