



**Leith**

**Water Distribution System**

**Summary & Annual Reports**

**2021**



# 2021 Summary report

## Safe Drinking Water Act

Following the Walkerton tragedy in 2000, the Ontario Government developed a new, comprehensive legislative paradigm based on a source to tap, multi-barrier approach to the protection of drinking water. The Safe Drinking Water Act (SDWA), 2002, and its Regulations, contain requirements for Municipalities that provide potable water to their residents.

Under Section 19 Standard of Care of the SDWA, owners of a Drinking Water System are required to:

- a) Exercise the level of care, diligence and skill in respect of a Municipal Drinking Water System that a reasonable prudent person would be expected to exercise in a similar situation; and
  - b) Act honestly, competently and with integrity, with a view to ensuring the protection and safety of the users of the Municipal Drinking Water System.
- 2002, c.32, s. 19(1)

## Summary Report

Schedule 22 of Ontario Regulation 170/03 requires, for Large Municipal Residential Systems, that a Summary Report be prepared for distribution to Council by March 31, 2022 for the period from January 1 to December 31, 2021.

This regulation also requires the owner produce a Summary Report that includes the following:

- The requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water license, and any orders applicable to the system that were not met at any time during the period covered by the report and specify the duration of the failure and describe the measures taken to correct the situation.

- A summary of quantities and flow rates of the water supplied during the period covered by the report including monthly average and maximum daily flows
- The summary report must be presented and accepted by Council by March 31<sup>st</sup> of each year.

A hard copy of the Annual and Summary reports will be made available free of charge at the Meaford Water Plant after March 31<sup>st</sup> 2022. It will also be available for viewing on the Municipal website [www.meaford.ca](http://www.meaford.ca).

## System Information – Leith Distribution System

Municipal Drinking Water Licence –089-102

Municipal Drinking Water Permit – 089-202

Permit to Take Water – N/A – Water received from Owen Sound

Financial Plan – 089-302

Accredited Operational Plan – 089-402

## 2021 Leith Distribution Flow Summary

	Date mm/dd/yyyy	Previous Read m3	Current Read m3	Metered Consumption m3	Billing Days	Avg per Day Consumption m3	Actual \$ per m3	Consumption \$
Start	1/11/2021		112173					
Actual	4/5/2021	112173	117725	5552	84	66.1	\$3.12	\$17,341.31
Actual	7/8/2021	117725	124415	6690	94	71.2	\$3.25	\$21,757.50
Actual	10/8/2021	124415	131042	6627	92	72.0	\$3.25	\$21,551.49
End	1/10/2022	131042	136720	5678	94	60.4	\$3.25	\$18,448.26
				<b>24,547</b> Annual Consumption	<b>364</b> Total Billing Days	<b>67.4</b> Annual Avg	<b>\$3.22</b> Annual Avg	<b>\$79,098.56</b> Annual Cost

# Leith 2021 Water Inventory

Owen Sound	Leith	Metered
<u>Metered</u>	<u>Metered</u>	<u>Difference</u>
24,547	15854	8693

2033 m3

278 m3

262.8 m3

**2574.1 m3**

Flushing

Flusher Leak

Analyzer ReCl2 station(runs at  
500ml/min approx.)

**Total**

**Difference- Total**

6119

<u>6119</u>	<b>24.93%</b>
24547	

Annual Summary-Distribution Bacteriological Data

WATER WORKS NAME:

Leith Water Distribution

YEAR

2021

SERVICE POPULATION

382.8

LABORATORIES WHICH PERFORMED ANALYSES

SGS Laboratory

MONTH	TOTAL COLIFORM			ESCHERICHIA COLI. (E. Coli)			H.P.C.			
	# of samples collected	# of samples safe	# of samples unsafe	# of samples collected	# of samples safe	# of samples unsafe	# of samples collected	# of samples safe	# of samples unsafe	Max
JAN.	9	9	0	9	9	0	4	4	0	12
FEB.	9	9	0	9	9	0	4	4	0	0
MAR.	11	11	0	11	11	0	5	5	0	0
APR.	9	9	0	9	9	0	4	4	0	0
MAY	9	9	0	9	9	0	4	4	0	0
JUN.	10	10	0	10	10	0	5	5	0	1
JUL.	9	9	0	9	9	0	4	4	0	1
AUG.	11	11	0	11	11	0	5	5	0	2
SEPT.	9	9	0	9	9	0	4	4	0	1
OCT.	9	9	0	9	9	0	4	4	0	0
NOV.	11	11	0	11	11	0	5	5	0	1
DEC.	9	9	0	9	9	0	4	4	0	0
<b>TOTAL</b>	<b>115</b>	<b>115</b>	<b>0</b>	<b>115</b>	<b>115</b>	<b>0</b>	<b>52</b>	<b>52</b>	<b>0</b>	<b>12</b>

Indicators of adverse water quality

If any of the following conditions exist, the drinking water is judged unsafe:

1. Eschericia coli and/or fecal coliforms are detected in any required sample other than raw water sample.
2. Total coliforms are detected in any required sample other than raw water sample.
3. Unchlorinated water is directed to the distribution system, where chlorination is used or required.  
This includes water in the distribution system, which has less than 0.05 mg/l of free chlorine residual when tested.

HPC % of Total Samples

**45 %**

If the water containing indicators of unsafe water quality for any of the reasons listed above, the laboratory will immediately notify the M.O.E. District Officer, M.O.E. Spills Action Centre, the local Medical Officer of Health and the owner / operator to initiate collection of special samples and or corrective action. In addition the owner / operator must notify the M.O.E. Spills Action Centre and the local Medical Officer of Health when they become aware of an adverse water quality condition.

Annual Summary- THM's, Lead

WATER WORKS NAME: Leith Water Distribution  
 YEAR 2021  
 SERVICE POPULATION 382.8  
 LABORATORIES WHICH PERFORMED ANALYSES SGS Laboratory

MONTH	DISTRIBUTION WATER Trihalomethanes (THM's)		Lead		Alkalinity		pH		HAA's (ug/L)
	NO. OF SAMPLES COLLECTED	THM's (ug/L)							
JAN.									
FEB.	1	24							27
MAR.	2		0.12	0.15	76	73	7.48	7.56	
APR.									
MAY	1	44							12.3
JUN.									
JUL.									
AUG.	1	67							22.5
SEPT.	2		0.11	0.15	66	72	7.24	7.28	
OCT.									
NOV.	1	76							24.4
DEC.									
RAA		52.8							21.6
MAC		100							80

MAC = Maximum Acceptable Concentration

## DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Flow	Initial
	Residual	Residual	Residual		
<b>January</b>	(mg/L)	(mg/L)	(mg/L)	<b>m3</b>	
<b>2021</b>					
1	1.24	1.37	1.30	76	JA
2	1.23	1.42	1.40	81	JA
3	1.21	1.42	1.24	80	JA
4	1.02	1.32	1.13	74	BR
5	1.1	1.31	1.15	73	BR
6	1.14	1.33	1.32	72	BR
7	1.06	1.2	1.11	71	BR
8	1.09	1.36	1.27	72	BR
9	0.96	1.39	1.05	79	CN
10	1.07	1.31	1.27	79	CN
11	1.15	1.43	1.18	74	BR
12	1.22	1.41	1.36	73	BR
13	1.2	1.39	1.39	71	JA
14	1.23	1.4	1.37	72	BR
15	1.26	1.51	1.43	72	BR
16	1.32	1.45	1.41	84	KH
17	1.19	1.41	1.36	82	KH
18	1.2	1.45	1.29	72	BR
19	1.19	1.47	1.40	69	JA
20	1.24	1.41	1.38	72	BR
21	1.24	1.33	1.28	70	BR
22	1.3	1.41	1.38	69	BR
23	1.29	1.43	1.39	77	JA
24	1.23	1.38	1.36	81	JA
25	1.3	1.88	1.42	76	BR
26	1.33	1.51	1.46	68	BR
27	1.29	1.43	1.40	72	BR
28	1.28	1.43	1.41	72	BR
29	1.21	1.5	1.45	70	BR
30	1.16	1.41	1.19	80	BR
31	1.27	1.45	1.34	78	BR
<b>Total</b>				<b>2311</b>	
<b>Average</b>			<b>1.32</b>	<b>75</b>	
<b>MIN</b>	<b>0.96</b>			<b>68</b>	
<b>MAX</b>		<b>1.88</b>		<b>84</b>	





## DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Flow	Initial
	Residual	Residual	Residual		
<b>March</b>	(mg/L)	(mg/L)	(mg/L)	<b>m3</b>	
<b>2021</b>					
1	1.15	1.53	1.27	75	JA
2	1.29	1.58	1.46	72	JA
3	1.31	1.6	1.54	73	JA
4	1.32	1.51	1.44	75	KH
5	1.25	1.53	1.40	77	KH
6	1.25	1.53	1.43	80	CN
7	1.29	1.52	1.42	83	CN
8	1.23	1.61	1.29	76	KH
9	1.39	1.6	1.49	76	KH
10	1.25	1.5	1.43	75	KH
11	1.29	1.56	1.49	76	KH
12	1.14	1.46	1.40	54	KH
13	1.2	1.49	1.41	31	KH
14	1.21	1.4	1.25	29	KH
15	1.22	1.34	1.29	27	JA
16	1.13	1.26	1.22	28	JA
17	1.13	1.31	1.20	30	JA
18	1.16	1.3	1.24	29	JA
19	1.18	1.33	1.33	26	JA
20	1.11	1.25	1.20	34	JA
21	1.18	1.29	1.27	36	JA
22	1.14	1.29	1.17	32	KH
23	1.13	1.52	1.23	31	KH
24	1.1	1.37	1.33	30	JA
25	1.03	1.18	1.03	31	KH
26	1.16	1.36	1.31	30	KH
27	1.11	1.29	1.23	35	BR
28	1.14	1.32	1.25	33	BR
29	1.28	1.4	1.29	28	BR
30	1.11	1.37	1.33	29	JA
31	1.05	1.17	1.12	29	JA
<b>Total</b>				<b>1470</b>	
<b>Average</b>			<b>1.31</b>	<b>47</b>	
<b>MIN</b>	<b>1.03</b>			<b>26</b>	
<b>MAX</b>		<b>1.61</b>		<b>83</b>	

## DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Flow	Initial
	Residual	Residual	Residual		
<b>April</b>	(mg/L)	(mg/L)	(mg/L)	<b>m3</b>	
<b>2021</b>					
1	1.13	1.36	1.23	26	BM
2	1.07	1.39	1.18	35	CN
3	1.27	1.4	1.35	32	CN
4	1.11	1.43	1.22	38	CN
5	1.29	1.43	1.36	33	CN
6	1.25	1.41	1.34	29	BM
7	1.19	1.32	1.28	28	BR
8	1.11	1.31	1.27	32	BR
9	1.12	1.29	1.26	33	BR
10	1.13	1.3	1.20	37	BR
11	1.23	1.44	1.28	32	BR
12	1.19	1.43	1.35	28	BR
13	1.21	1.4	1.35	29	JA
14	1.27	1.41	1.38	27	BM
15	1.16	1.39	1.36	27	JA
16	1.16	1.32	1.28	29	JA
17	1.2	1.29	1.23	36	JA
18	1.26	1.43	1.35	36	JA
19	1.27	1.45	1.32	33	JA
20	1.11	1.31	1.22	26	BM
21	1.16	1.34	1.25	26	BM
22	1.18	1.41	1.35	30	BM
23	1.19	1.32	1.27	30	CH
24	1.21	1.38	1.25	37	C
25	1.19	1.37	1.31	36	C
26	1.21	1.38	1.27	34	JA
27	1.16	1.36	1.18	28	JA
28	1.16	1.38	1.31	28	JA
29	1.2	1.37	1.34	33	JA
30	1.16	1.33	1.27	29	JA
<b>Total</b>				<b>937</b>	
<b>Average</b>			<b>1.29</b>	<b>31</b>	
<b>MIN</b>	<b>1.07</b>			<b>26</b>	
<b>MAX</b>		<b>1.45</b>		<b>38</b>	

## DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Flow	Initial
	Residual	Residual	Residual		
<b>May</b>	(mg/L)	(mg/L)	(mg/L)	<b>m3</b>	
<b>2021</b>					
1	1.2	1.4	1.28	32	CN
2	1.15	1.4	1.38	34	CN
3	1.27	1.39	1.36	29	JA
4	1.23	1.41	1.32	27	JA
5	1.29	1.43	1.39	27	JA
6	1.18	1.34	1.23	34	JA
7	0.96	1.24	1.26	29	JA
8	1.08	1.43	1.16	45	JA
9	1.21	1.43	1.30	36	JA
10	1.2	1.36	1.24	30	BR
11	1.32	1.43	1.35	30	BR
12	1.2	1.38	1.31	37	BR
13	1.23	1.38	1.31	44	BR
14	1.25	1.47	1.30	44	BR
15	1.23	1.49	1.28	73	BR
16	1.26	1.52	1.37	68	BR
17	1.4	1.6	1.45	52	JA
18	1.36	1.65	1.60	65	JA
19	1.41	1.7	1.54	72	BR
20	1.56	1.64	1.56	65	JA
21	1.42	1.6	1.52	70	JA
22	1.41	1.54	1.43	84	CN
23	1.4	1.72	1.46	49	CN
24	1.43	1.7	1.60	67	CN
25	1.34	1.65	1.61	57	JA
26	1.29	1.47	1.38	33	JA
27	1.29	1.56	1.39	35	JA
28	1.32	1.53	1.34	28	BR
29	1.34	1.53	1.50	46	JA
30	1.32	1.58	1.30	63	JA
31	1.52	1.61	1.58	66	BR
<b>Total</b>				<b>1471</b>	
<b>Average</b>			<b>1.39</b>	<b>47</b>	
<b>MIN</b>	<b>0.96</b>			<b>27</b>	
<b>MAX</b>		<b>1.72</b>		<b>84</b>	

## DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Flow	Initial
	Residual	Residual	Residual		
<b>June</b>	(mg/L)	(mg/L)	(mg/L)	<b>m3</b>	
<b>2021</b>					
1	1.43	1.6	1.47	53	JA
2	1.4	1.51	1.45	49	BR
3	1.47	1.63	1.57	39	BR
4	1.54	1.6	1.56	50	BR
5	1.45	1.67	1.51	70	BR
6	1.59	1.8	1.61	90	BR
7	1.4	1.64	1.47	61	BR
8	1.45	1.62	1.49	67	BR
9	1.54	1.67	1.57	63	BR
10	1.52	1.75	1.54	72	BR
11	1.25	1.61	1.36	57	BM
12	1.25	1.59	1.33	73	CN
13	1.38	1.67	1.47	96	CN
14	1.29	1.52	1.50	57	JA
15	1.29	1.38	1.31	55	BM
16	1.31	1.38	1.33	60	BM
17	1.27	1.47	1.31	62	BM
18	1.36	1.49	1.46	71	BM
19	1.25	1.47	1.31	96	BM
20	1.29	1.45	1.30	76	BM
21	1.22	1.38	1.36	47	BM
22	1.11	1.48	1.16	67	BM
23	1.32	1.54	1.41	60	BM
24	1.34	1.53	1.46	55	BM
25	1.36	1.47	1.40	42	EH
26	1.31	1.43	1.41	35	BR
27	1.38	1.54	1.48	43	BR
28	1.27	1.44	1.29	37	BM
29	1.34	1.47	1.36	35	BM
30	1.3	1.57	1.31	39	BM
<b>Total</b>				<b>1777</b>	
<b>Average</b>			<b>1.42</b>	<b>59</b>	
<b>MIN</b>	<b>1.11</b>			<b>35</b>	
<b>MAX</b>		<b>1.8</b>		<b>96</b>	

## DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Flow	Initial
	Residual	Residual	Residual		
<b>July</b>	(mg/L)	(mg/L)	(mg/L)	<b>m3</b>	
<b>2021</b>					
1	1.41	1.54	1.41	50	CN
2	1.25	1.45	1.36	51	BM
3	1.25	1.49	1.38	64	CN
4	1.3	1.49	1.43	64	CN
5	1.25	1.38	1.28	40	BM
6	1.15	1.29	1.21	36	BM
7	1.14	1.35	1.20	31	BM
8	1.23	1.33	1.29	33	BM
9	1.19	1.28	1.23	36	EH
10	1.18	1.41	1.20	44	BR
11	1.28	1.37	1.29	46	BR
12	1.21	1.34	1.22	41	EH
13	1.33	1.48	1.33	34	BM
14	1.18	1.3	1.22	38	BM
15	1.02	1.25	1.08	35	BM
16	1.08	1.4	1.09	43	BM
17	1.28	1.41	1.32	45	BR
18	1.2	1.44	1.23	56	BR
19	1.14	1.41	1.29	45	EH
20	1.13	1.29	1.16	34	EH
21	1.09	1.26	1.11	33	CN
22	1.12	1.36	1.13	39	CN
23	1.27	1.46	1.06	37	CN
24	1.16	1.41	1.30	42	CN
25	1.09	1.38	1.12	47	CN
26	1.25	1.59	1.29	41	BM
27	1.19	1.45	1.43	39	EH
28	1.4	1.47	1.44	43	BM
29	1.35	1.98	1.40	47	BM
30	1.23	1.41	1.25	44	BM
31	1.11	1.32	1.27	45	BM
<b>Total</b>				<b>1323</b>	
<b>Average</b>			<b>1.26</b>	<b>43</b>	
<b>MIN</b>	<b>1.02</b>			<b>31</b>	
<b>MAX</b>		<b>1.98</b>		<b>64</b>	

## DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Flow	Initial
	Residual	Residual	Residual		
<b>August</b>	(mg/L)	(mg/L)	(mg/L)	<b>m3</b>	
<b>2021</b>					
1	1.13	1.33	1.31	44	BM
2	1.05	1.22	1.16	44	BM
3	1.03	1.25	1.12	48	BM
4	0.94	1.21	1.16	38	BM
5	0.94	1.25	1.03	34	BM
6	0.98	1.19	0.98	40	BR
7	1.12	1.33	1.15	46	BR
8	1.07	1.27	1.20	44	BR
9	1.05	1.34	1.06	35	DL
10	1.21	1.3	1.23	35	DL
11	1.18	1.34	1.20	34	BM
12	1.16	1.32	1.20	36	DL
13	1.22	1.31	1.23	39	DL
14	1.15	1.29	1.20	43	CN
15	1.15	1.35	1.27	45	CN
16	1.14	1.25	1.17	43	DL
17	1.13	1.26	1.17	39	DL
18	1.08	1.26	1.11	76	BM
19	1.12	1.23	1.14	40	DL
20	1.14	1.32	0.96	46	BM
21	1.14	1.27	1.18	50	BR
22	1.14	1.32	1.18	57	BR
23	1.16	1.29	1.23	50	JA
24	1.14	1.24	1.18	71	JA
25	1.18	1.32	1.20	72	JA
26	1.22	1.49	1.23	49	JA
27	1.2	1.41	1.34	48	JA
28	1.18	1.32	1.24	51	JA
29	0.94	1.22	1.09	49	JA
30	0.93	1.14	0.96	40	JA
31	1.07	1.24	1.09	40	DL
<b>Total</b>				<b>1426</b>	
<b>Average</b>			<b>1.16</b>	<b>46</b>	
<b>MIN</b>	<b>0.93</b>			<b>34</b>	
<b>MAX</b>		<b>1.49</b>		<b>76</b>	

## DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Flow	Initial
	Residual	Residual	Residual		
<b>September</b>	(mg/L)	(mg/L)	(mg/L)	<b>m3</b>	
<b>2021</b>					
1	1.14	1.25	1.21	41	DL
2	1.08	1.21	1.10	45	DL
3	1.14	1.3	1.21	47	EH
4	1.09	1.27	1.11	49	BR
5	1.1	1.24	1.16	50	BR
6	1.15	1.25	1.20	50	BR
7	1.16	1.41	1.20	98	JA
8	1.16	1.5	1.18	130	DL
9	1.24	1.61	1.25	189	JA
10	1.32	1.48	1.34	39	DL
11	1.31	1.55	1.39	37	JA
12	1.16	1.34	1.26	48	JA
13	1.05	1.21	1.16	36	DL
14	0.99	1.19	1.07	35	DL
15	1.09	1.21	1.17	37	JA
16	0.93	1.13	1.00	42	DL
17	0.99	1.25	1.03	43	DL
18	1.08	1.22	1.11	50	BR
19	0.94	1.21	1.12	53	BR
20	0.93	1.31	1.14	40	JA
21	1.03	1.2	1.13	37	JA
22	1.02	1.23	1.09	39	JA
23	1.04	1.18	1.11	41	DL
24	0.98	1.3	1.21	37	DL
25	0.89	1.1	1.01	41	JA
26	0.87	1.05	0.93	46	JA
27	0.65	1.02	0.70	37	DL
28	0	0.95	0.71	159	DL
29	0.65	1.02	0.93	33	DL
30	0.86	1.14	0.87	34	DL
<b>Total</b>				<b>1663</b>	
<b>Average</b>			<b>1.10</b>	<b>55</b>	
<b>MIN</b>	<b>0</b>			<b>33</b>	
<b>MAX</b>		<b>1.61</b>		<b>189</b>	

\*Sept 7-8 Auto Flusher leaking

\*Sept 9 Hydrant flushing

\*Sept 28 AWQI - Low chlorine residual, extra flow for flushing system



## DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Flow	Initial
	Residual	Residual	Residual		
<b>October</b>	(mg/L)	(mg/L)	(mg/L)	<b>m3</b>	
<b>2021</b>					
1	0.93	1.06	1.00	33	DL
2	0.8	0.96	0.93	35	DL
3	0.77	1.03	0.85	36	DL
4	0.87	1.11	0.91	33	BR
5	0.78	1.03	0.95	30	JA
6	0.69	1.24	0.78	34	JA
7	0.79	1.16	0.88	40	JA
8	0.82	1.28	1.00	36	BR
9	0.8	1.21	0.99	42	JA
10	0.89	1.19	1.04	42	JA
11	0.94	1.14	1.11	43	JA
12	0.93	1.27	1.23	34	BR
13	1.11	1.25	1.18	30	BR
14	1.09	1.25	1.11	29	BR
15	1.11	1.27	1.16	34	BR
16	1.13	1.29	1.18	38	BR
17	0.85	1.98	1.09	48	BR
18	0.87	2.07	1.23	32	CH
19	1.04	1.24	1.16	37	CH
20	0.75	2.25	1.08	37	DL
21	1	1.23	1.08	32	DL
22	0.99	1.75	1.05	32	CH
23	0.81	2	1.09	36	CH
24	0.83	2.11	1.01	44	CH
25	0.96	1.59	1.02	34	DL
26	1.09	1.29	1.13	31	DL
27	1.03	1.22	1.10	29	BR
28	0.99	1.6	1.08	31	DL
29	1.11	1.5	1.32	30	DL
30	1.25	1.5	1.35	35	DL
31	1.16	1.45	1.27	41	DL
<b>Total</b>				<b>1098</b>	
<b>Average</b>			<b>1.08</b>	<b>35</b>	
<b>MIN</b>	<b>0.69</b>			<b>29</b>	
<b>MAX</b>		<b>2.25</b>		<b>48</b>	

## DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Flow	Initial
	Residual	Residual	Residual		
<b>November</b>	(mg/L)	(mg/L)	(mg/L)	<b>m3</b>	
<b>2021</b>					
1	1.21	1.46	1.22	33	JA
2	1.27	1.46	1.43	32	JA
3	1.21	1.43	1.36	32	JA
4	1.21	1.47	1.27	32	JA
5	1.23	1.43	1.30	33	JA
6	1.11	1.34	1.13	37	JA
7	1.1	1.41	1.16	41	JA
8	1.16	1.45	1.25	32	BR
9	1.14	1.45	1.15	29	BR
10	1.13	1.32	1.20	30	BR
11	1.02	1.41	1.31	29	BR
12	1.07	1.69	1.67	30	BR
13	1.2	1.64	1.28	37	BR
14	1.39	1.65	1.49	37	BR
15	1.35	1.67	1.59	30	JA
16	1.2	1.47	1.32	30	DL
17	1.28	1.55	1.40	31	JA
18	1.3	1.54	1.35	31	BM
19	1.31	1.56	1.48	32	BM
20	1.21	1.57	1.28	34	BM
21	1.32	1.56	1.43	38	BM
22	0.73	2.04	1.12	29	DL
23	0.67	1.94	0.93	29	DL
24	0.7	1.62	1.15	23	DL
25	0.54	1.72	0.96	29	EH
26	0.98	1.28	1.21	28	DL
27	0.89	2.02	1.15	28	DL
28	1	1.28	1.22	29	DL
29	0.79	1.96	1.09	23	JA
30	0.91	1.36	1.27	26	BR
<b>Total</b>				<b>934</b>	
<b>Average</b>			<b>1.27</b>	<b>31</b>	
<b>MIN</b>	<b>0.54</b>			<b>23</b>	
<b>MAX</b>		<b>2.04</b>		<b>41</b>	

## DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Flow	Initial
	Residual	Residual	Residual		
<b>December</b>	(mg/L)	(mg/L)	(mg/L)	<b>m3</b>	
<b>2021</b>					
1	1.15	1.31	1.27	30	JA
2	1.17	1.38	1.34	30	DL
3	1.14	1.41	1.32	30	JA
4	1.18	1.36	1.30	29	JA
5	1.2	1.32	1.25	42	JA
6	1.14	1.33	1.25	30	CH
7	1.05	1.38	1.20	25	BR
8	1.01	1.37	1.23	22	BR
9	1	1.93	1.06	26	BR
10	1.05	1.31	1.29	34	BR
11	1.06	1.4	1.13	35	BR
12	1.07	1.38	1.27	37	BR
13	1.09	1.31	1.17	34	BM
14	1	1.28	1.05	28	DL
15	1.16	1.33	1.30	26	CH
16	1.13	1.28	1.17	30	DL
17	0.98	1.87	1.29	39	CH
18	1.03	1.34	1.16	38	CH
19	1.18	1.35	1.28	32	CH
20	1.24	1.4	1.37	26	JA
21	1.12	1.38	1.21	30	JA
22	1.08	1.41	1.15	33	JA
23	1.17	1.32	1.20	28	DL
24	1.16	1.32	1.21	31	JA
25	1.18	1.34	1.25	39	JA
26	1.12	1.36	1.20	41	JA
27	1.18	1.38	1.32	31	JA
28	1.09	1.29	1.25	35	JA
29	1.09	1.27	1.20	33	DL
30	1.12	1.36	1.25	34	DL
31	1.14	1.36	1.18	31	DL
<b>Total</b>				<b>989</b>	
<b>Average</b>			<b>1.23</b>	<b>32</b>	
<b>MIN</b>	<b>0.98</b>			<b>22</b>	
<b>MAX</b>		<b>1.93</b>		<b>42</b>	



# 2021 Annual Compliance Report

## Drinking Water System General Information

---

This report has been prepared in accordance with the reporting requirements of the Safe Drinking Water Act 2002 O. Reg 170/03, s 11(1), (3), (6), (7), (8), (9.1) and 10 as well as Schedule 22-1 and 22-2.

This annual report has been included in the Water Summary Report presented to Council and can be viewed on the Municipal website at [www.meaford.ca](http://www.meaford.ca)

## Drinking Water System Information

---

Drinking Water System Number	260065312
Drinking Water System Name	The Leith Distribution System
Drinking Water System Owner	Municipality of Meaford
Drinking Water System Category	Large Municipal Residential
Period being reported	January 1, 2021 to December 31, 2021
Does your Drinking Water System serve more than 10,000 people?	No

## Drinking Water System Description

---

The Leith Distribution System is situated on Georgian Bay in Meaford, Ontario. The Leith water plant was shut down in 2005 following agreement with the City of Owen Sound to supply drinking water to the Hamlet of Leith. The system consists of a Booster pumping station, a flow metering Chamber and a Rechlorination Facility.

## Leith Rechlorination Facility

The Leith Rechlorination facility consists of two sodium hypochlorite chemical feed pumps, each paced to flow with automatic switchover control. One sodium Hypochlorite chemical storage tank with secondary containment is also onsite. This station communicates back to the

main SCADA at the Meaford Water Treatment Plant for online monitoring. There is no method for back-up power at this facility.

The UTM Coordinates are Zone 17, E 507320 m, N 4940120 m

### **Leith Booster Station**

The Leith Booster station located on Grey Road 15, provides pressure to the residences to the south of the station heading up towards Annan. The station has two centrifugal pumps each rated at 0.9L/s, 27 m TDH, along with two 450 L hydro pneumatic tanks. This station has no communication capabilities for online monitoring or back-up power.

The UTM Coordinates are Zone 17, E 510180 m, N 4940850 m

### **Leith Metering Chamber**

The Leith Metering Chamber is located at the municipal boundary at the intersection of 36<sup>th</sup> Street East and East Bayshore Road, It consists of one flowmeter to measure water flow from the Owen Sound System into the Leith System.

The UTM Coordinates are Zone 17, E 506930 m, N 4939310 m

### **Summary of Water Treatment Chemicals Used Over this Reporting Period**

---

Sodium Hypochlorite – is a disinfectant used to disinfect water going through the Leith distribution System.

### **Summary of Monetary Expenses Incurred in 2021**

---

There were no major monetary expenses incurred in 2021

### **Summary of Adverse Drinking Water Quality Results**

---

There was one incident of low chlorine which occurred September 28<sup>th</sup> 2021 referenced under AWQI #155716.

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

---

<b>Parameter</b>	<b>Number of Samples</b>	<b>Range of E. Coli or Fecal Results Min-Max</b>	<b>Range of Total Coliform Results Min-Max</b>	<b>Number of HPC Samples</b>	<b>Results of HPC Results Min # to Max #</b>
Distribution	118	0	0	53	0-12

**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**

N/A

**Summary of Operational Testing completed under Schedule 7, 8, or 9 of Ontario Regulation 170/03 during this reporting period**

	<b>Number of Grab Samples</b>	<b>Range of Results Min # to Max #</b>	<b>Unit of Measure</b>
<b>Chlorine</b>			
Distribution	8760	0.00-2.25	mg/L

**Summary of additional Testing and Sampling**

Please see attached additional sampling results for Haloacetic Acids, pH, Alkalinity and Trihalomethanes

**Haloacetic Acid**

<b>Quarter</b>	<b>HAA Sample Result ug/L</b>	<b>Sampling Location</b>
A	27	Old Water Plant (359466 Bayshore Rd)
B	12.3	359115 Grey Rd. 15
C	22.5	359115 Grey Rd. 15
D	24.4	359115 Grey Rd. 15
<b>RAA</b>	<b>21.6</b>	

**Trihalomethanes**

<b>Quarter</b>	<b>THM Sample Result ug/L</b>	<b>Sampling Location</b>
A	24	359115 Grey Rd. 15
B	44	Old Water Plant (359466 Bayshore Rd.)
C	67	Old Water Plant (359466 Bayshore Rd.)
D	76	Old Water Plant (359466 Bayshore Rd.)
<b>RAA</b>	<b>52.8</b>	

### pH & Alkalinity Results

Sample Date	Location	pH	Alkalinity mg/L as CaCo3
March 22, 2021	303051 Grey Rd. 15	7.48	76
	359466 Bayshore Rd.	7.56	73
September 20, 2021	Auto Flusher (Grey Rd. 15 dead end)	7.24	66
	Yard Hydrant (359466 Bayshore Rd)	7.28	72

### Summary of Lead Testing

Date	Location	Lead Results	Unit of Measure	Number of Exceedances
March 22, 2021	303051 Grey Rd. 15	0.12	Ug/L	0
	359466 Bayshore Rd.	0.15		
September 20, 2021	Auto Flusher (Grey Rd. 15 dead end)	0.11		
	Yard Hydrant (359466 Bayshore Rd)	0.15		