Municipality of Meaford

Leith
Water Distribution System

Summary & Annual Reports

2023

2023 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 is included in the Water Summary Report presented to Council and can be viewed on the Municipal website at www.meaford.ca/WaterReports

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, 2023 to December 31, 2023
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 450L 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 36th Street Each and East Bayshore Road, it consists of one flowmeter to measure water flow from the Owen Sound System into the Leith System. The flow meter is owned and maintained by the City of Owen Sound.

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 2023

There were no major monetary expenses incurred in 2023.

Summary of Adverse Drinking Water Quality Results

There were no incidents of adverse drinking water quality results during 2023.

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

Parameter	Number of Samples	Range of E. Coli or Fecal Results Min-Max	Range of Total Coliform Results Min-Max	Number of HPC Samples	Results of HPC Results Min # to Max #
Distribution	116	0	0	52	0-1

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

	Number of Grab Samples	Range of Results Min # to Max #	Unit of Measure
Chlorine			
Distribution	8760	0.80-2.37	mg/L

Summary of additional Testing and Sampling

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

Haloacetic Acid

Quarter	HAA Sample Result ug/L	Sampling Location
A	13.2	359115 Grey Rd. 15
B	13.2	359115 Grey Rd. 15
C	17.4	359115 Grey Rd. 15
D	35.4	303051 Grey Rd. 15
RAA	**19.8**	

Trihalomethanes

Quarter	THM Sample Result ug/L	Sampling Location
A	36	359466 Bayshore Rd.
B	75	359466 Bayshore Rd.
C	32	303051 Grey Rd. 15
D	64	359466 Bayshore Rd.
RAA	**51.8**	

pH & Alkalinity Results

Sample Date	Location	pH	Alkalinity mg/L as CaCo3
March 27, 2023	359466 Bayshore Rd.	7.22	77
March 27, 2023	Sample Stn., Grey Rd. 15	7.37	88
September 25, 2023	359466 Bayshore Rd.	7.10	68
September 25, 2023	Sample Stn., Grey Rd. 15	7.14	76

Summary of Lead Testing

Date	Location	Lead Results	Unit of Measure	Number of Exceedances
March 27, 2023	359466 Bayshore Rd.	0.17	Ug/L	0
March 27, 2023	Sample Stn., Grey Rd. 15	0.05	Ug/L	0
September 25, 2023	359466 Bayshore Rd.	0.30	Ug/L	0
September 25, 2023	Sample Stn., Grey Rd. 15	0.05	Ug/L	0

2023 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, 2024 for the period from January 1 to December 31, 2023.

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 31st 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 31st 2024. It will also be available for viewing on the Municipal website 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

Leith Water Distribution System

The Leith Water Distribution System is located on Grey Road 15 and serves the hamlet of Leith, Ontario. The original Leith Water Treatment Plant was decommissioned in December of 2005. Since this time potable water has been received from the City of Owen Sound Water Treatment Plant. The Leith Distribution System is a Class 2 system.

The existing water works consists of a trunk watermain connecting the City of Owen Sound water system to the Leith water system. A flow metering chamber is located near the intersection of 36th Street east and East Bayshore Road. The Leith water system also includes a re-chlorination (sodium hypochlorite) building and a booster pumping building located along Grey Road 15.

The Leith Water Distribution System is operated as part of Municipality of Meaford Environmental Services Department. The Leith Distribution flow and chlorine residuals are remotely monitored by the SCADA located at the Meaford Water Treatment Plant.

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Initial
	Residual	Residual	Residual	
January	(mg/L)	(mg/L)	(mg/L)	
2023				
1	1.31	1.53	1.44	CH
2	1.31	1.52	1.47	OS
3	1.38	1.63	1.53	DL
4	1.12	1.43	1.41	DL
5	0.88	2.04	1.11	DL
6	0.8	2.37	0.96	DL
7	0.91	2.2	1.00	DL
8	0.81	1.83	1.27	DL
9	0.83	1.78	1.00	BW
10	0.91	1.65	1.23	BW
11	1.09	1.47	1.30	BW
12	1.16	1.43	1.37	BW
13	1.03	1.23	1.11	BW
14	1.17	1.42	1.40	BW
15	1.19	1.41	1.23	BW
16	1.29	1.63	1.31	BW
17	1.43	1.63	1.54	OS
18	1.29	1.63	1.53	OS
19	1.29	1.6	1.51	BW
20	1.43	1.63	1.54	OS
21	1.43	1.65	1.61	OS
22	1.46	1.71	1.69	OS
23	1.45	1.72	1.54	DL
24	1.38	1.65	1.60	DL
25	1.39	1.65	1.52	DL
26	1.32	1.63	1.59	DL
27	1.22	1.45	1.36	DL
28	1.25	1.58	1.37	DL
29	1.25	1.47	1.32	DL
30	1.32	1.55	1.54	BW
31	1.37	1.58	1.37	BW
Total				
Average			**1.38**	
MIN	**0.8**			
MAX		**2.37**		

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Initial
	Residual	Residual	Residual	
February	(mg/L)	(mg/L)	(mg/L)	
2023				
1	1.4	1.72	1.66	BW
2	1.37	1.62	1.58	BW
3	1.36	1.54	1.48	BW
4	1.36	1.58	1.50	BW
5	1.29	1.52	1.43	BW
6	1.3	1.65	1.61	OS
7	1.43	1.74	1.71	OS
8	1.43	1.7	1.61	OS
9	1.41	1.74	1.71	OS
10	1.42	1.76	1.74	OS
11	1.53	1.71	1.63	OS
12	1.29	1.62	1.58	OS
13	1.3	1.53	1.46	DL
14	1.34	1.51	1.47	DL
15	1.29	1.47	1.32	BW
16	1.23	1.41	1.30	DL
17	1.29	1.41	1.34	DL
18	1.25	1.5	1.40	BW
19	1.23	1.63	1.31	BW
20	1.31	1.62	1.42	OS
21	1.39	1.6	1.46	BW
22	1.33	1.6	1.47	OS
23	1.45	1.77	1.53	BW
24	1.65	1.83	1.72	BW
25	1.5	1.82	1.76	BW
26	1.65	1.94	1.81	BW
27	1.4	1.78	1.45	OS
28	1.32	1.54	1.48	OS
Total				
Average			**1.53**	
MIN	**1.23**			
MAX		**1.94**		

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN Residual	MAX Residual	Actual Free Chlorine Residual	Initial
March	(mg/L)	(mg/L)	(mg/L)	
2023				
1	1.31	1.59	1.58	DL
2	1.31	1.56	1.41	CH
3	1.22	1.63	1.56	CH
4	1.19	1.38	1.34	OS
5	1.16	1.37	1.33	OS
6	1.31	1.47	1.40	CH
7	1.27	1.51	1.45	BW
8	1.27	1.45	1.41	BW
9	1.26	1.47	1.31	BW
10	1.22	1.5	1.39	BW
11	1.22	1.41	1.38	CH
12	1.25	1.42	1.36	CH
13	1.38	1.62	1.43	BW
14	1.43	1.65	1.54	BW
15	1.43	1.63	1.60	BW
16	1.43	1.64	1.64	BW
17	1.25	1.54	1.39	OS
18	1.24	1.43	1.38	BW
19	1.22	1.38	1.27	BW
20	1.32	1.49	1.38	BW
21	1.21	1.45	1.41	EH
22	1.23	1.43	1.41	EH
23	1.16	1.39	1.33	EH
24	1.1	1.31	1.20	EH
25	1.16	1.39	1.36	OS
26	1.06	1.22	1.11	OS
27	1.14	1.51	1.48	OS
28	1.23	1.43	1.33	OS
29	1.14	1.41	1.27	OS
30	1.12	1.41	1.25	OS
31	1.34	1.5	1.44	OS
Total				
Average			**1.39**	
MIN	**1.06**			
MAX		**1.65**		

7:18 reset PLC, still no comms, took manual residual, comms on at 7:28

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN Residual	MAX Residual	Actual Free Chlorine Residual	Initial
April	(mg/L)	(mg/L)	(mg/L)	
2023				
1	1.33	1.54	1.42	OS
2	1.28	1.53	1.43	OS
3	1.21	1.5	1.39	EH
4	1.45	1.65	1.55	OS
5	1.27	1.7	1.36	BW
6	1.27	1.51	1.43	BW
7	1.29	1.69	1.55	BW
8	1.58	1.75	1.69	BW
9	1.47	1.72	1.58	BW
10	1.19	1.67	1.40	BW
11	0.89	1.5	0.90	OS
12	1.08	1.52	1.36	BW
13	1.14	1.51	1.31	BW
14	1.27	1.58	1.36	EH
15	1.31	1.62	1.41	CH
16	1.37	1.75	1.61	CH
17	1.44	1.72	1.57	EH
18	1.36	1.62	1.55	EH
19	1.34	1.63	1.58	BW
20	1.29	1.63	1.36	EH
21	1.3	1.52	1.34	EH
22	1.32	1.58	1.43	EH
23	1.07	1.41	1.09	EH
24	1.24	1.48	1.33	EH
25	1.21	1.47	1.41	OS
26	1.13	1.58	1.40	EH
27	1.29	1.54	1.42	BW
28	1.32	1.56	1.45	OS
29	1.29	1.52	1.39	CH
30	1.11	1.52	1.48	CH
Total				
Average			**1.42**	
MIN	**0.89**			
MAX		**1.75**		

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Initial
	Residual	Residual	Residual	
May	(mg/L)	(mg/L)	(mg/L)	
2023				
1	1.1	1.36	1.34	EH
2	0.98	1.32	1.23	EH
3	1.11	1.34	1.23	BW
4	1.19	1.33	1.27	BW
5	1.18	1.49	1.25	EH
6	1.17	1.49	1.27	BW
7	1.14	1.61	1.31	BW
8	1.18	1.52	1.38	EH
9	1.17	1.42	1.38	EH
10	1.16	1.4	1.27	EH
11	1.18	1.46	1.37	EH
12	1.23	1.51	1.47	EH
13	1.39	1.61	1.56	EH
14	1.4	1.62	1.54	EH
15	1.4	1.53	1.45	EH
16	1.37	1.64	1.58	BW/EH
17	1.43	1.66	1.60	EH
18	1.44	1.66	1.63	EH
19	1.31	1.57	1.61	EH
20	1.31	1.52	1.49	CH
21	1.35	1.56	1.54	CH
22	1.42	1.62	1.43	CH
23	1.35	1.55	1.38	EH
24	1.42	1.55	1.43	BW
25	1.31	1.47	1.38	EH
26	1.32	1.53	1.49	EH
27	1.32	1.54	1.46	EH
28	1.39	1.65	1.60	BW
29	1.27	1.56	1.38	EH
30	1.38	1.6	1.45	EH
31	1.4	1.59	1.47	EH
Total				
Average			**1.43**	
MIN	**0.98**			
MAX		**1.66**		

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Initial
	Residual	Residual	Residual	
June	(mg/L)	(mg/L)	(mg/L)	
2023				
1	1.43	1.58	1.48	EH
2	1.34	1.62	1.36	NE
3	1.47	1.63	1.54	EH
4	1.41	1.65	1.43	EH
5	1.45	1.62	1.59	EH
6	1.41	1.59	1.57	NE
7	1.37	1.56	1.41	NE
8	1.34	1.6	1.38	NE
9	1.43	1.68	1.54	NE
10	1.43	1.61	1.59	BW
11	1.43	1.6	1.58	BW
12	1.45	1.61	1.47	NE
13	1.36	1.54	1.43	NE
14	1.4	1.52	1.46	BW
15	1.4	1.58	1.43	BW
16	1.29	1.47	1.43	NE
17	1.29	1.54	1.43	CH
18	1.32	1.6	1.50	CH
19	1.4	1.61	1.54	EH
20	1.38	1.56	1.52	NE
21	1.38	1.57	1.50	NE
22	1.29	1.61	1.59	EH
23	1.31	1.48	1.43	NE
24	1.36	1.51	1.48	EH
25	1.23	1.5	1.32	EH
26	1.26	1.53	1.45	MD
27	1.3	1.43	1.36	MD
28	1.34	1.45	1.36	MD
29	1.2	1.47	1.43	MD
30	1.23	1.34	1.30	NE
Total				
Average			**1.46**	
MIN	**1.2**			
MAX		**1.68**		

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN Residual	MAX Residual	Actual Free Chlorine Residual	Initial	
July	(mg/L)	(mg/L)	(mg/L)		
2023					
1	1.23	1.4	1.27	BW	
2	1.3	1.49	1.39	BW	
3	1.37	1.5	1.41	BW	
4	1.35	1.66	1.40	MD	
5	1.38	1.63	1.38	NE	
6	1.46	1.62	1.57	CH	
7	1.39	1.52	1.48	NE	
8	1.38	1.52	1.41	CH	
9	1.43	1.54	1.45	CH	
10	1.43	1.56	1.49	NE	
11	1.3	1.48	1.45	NE	
12	1.38	1.49	1.46	NE	
13	1.33	1.42	1.34	NE	
14			1.47	NE	PLC Offline, Residual record on site
15				EH	PLC Offline, Residual record on site
16				EH	PLC Offline, Residual record on site
17				NE	PLC Offline, Residual record on site
18				NE	PLC Offline, Residual record on site
19				BW	PLC Offline, Residual record on site
20				NE	PLC Offline, Residual record on site
21	1.23	1.34		NE	PLC Offline, Residual record on site
22	1.29	1.49	1.35	BW	
23	1.83	1.47	1.43	BW	
24	1.36	1.59	1.87	MD	
25	1.31	1.59	1.55	MD	
26	1.34	1.55	1.52	MD	
27	1.29	1.47	1.32	MD	
28	1.32	1.5	1.49	MD	
29	1.34	1.52	1.46	MD	
30	1.34	1.47	1.42	MD	
31	1.33	1.47	1.43	BW	
Total					
Average			**1.45**		
MIN	**1.23**				
MAX		**1.66**			

***July 21 PLC back online**

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN Residual	MAX Residual	Actual Free Chlorine Residual	Initial	
August	(mg/L)	(mg/L)	(mg/L)		
2023					
1	1.29	1.42	1.35	BW	
2	1.21	1.75	1.25	JR	Hydrant Flushing
3	1.44	1.71	1.52	JR	Hydrant Flushing
4	1.5	1.61	1.56	EH	
5	1.42	1.56	1.52	EH	
6	1.29	1.56	1.30	EH	
7	1.3	1.56	1.36	EH	
8	1.21	1.55	1.29	JR	
9	1.32	1.52	1.41	JR	
10	1.28	1.39	1.31	BW	
11	1.29	1.43	1.32	BW	
12	1.23	1.49	1.27	BW	
13	1.26	1.42	1.31	BW	
14	1.29	1.88	1.33	JR	
15	1.31	1.41	1.33	MD	
16	1.33	1.43	1.35	MD	
17	1.28	1.38	1.30	MD	
18	1.23	1.32	1.25	MD	
19	1.27	1.36	1.04	MD	
20	1.3	1.4	1.38	MD	
21	1.21	1.4	1.34	BW	
22	1.23	1.41	1.36	JR	
23	1.14	1.36	1.32	JR	
24	1.15	1.27	1.23	EH	
25	1.21	1.37	1.27	JR	
26	1.22	1.36	1.23	EH	
27	1.27	1.41	1.29	EH	
28	1.24	1.52	1.47	NE	
29	1.17	1.46	1.21	NE	
30	1.25	1.4	1.38	NE	
31	1.28	1.43	1.33	BW	
Total					
Average			**1.33**		
MIN	**1.14**				
MAX		**1.88**			

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Initial
	Residual	Residual	Residual	
September	(mg/L)	(mg/L)	(mg/L)	
2023				
1	1.15	1.41	1.23	EH
2	1.2	1.28	1.23	BW
3	1.16	1.3	1.20	BW
4	1.11	1.31	1.25	BW
5	1.12	1.38	1.36	JR
6	1.22	1.91	1.23	NE
7	1.27	1.44	1.43	JR
8	1.32	1.5	1.46	NE
9	1.35	1.5	1.43	NE
10	1.31	1.41	1.35	NE
11	1.28	1.44	1.42	JR
12	1.16	1.36	1.29	NE
13	1.1	1.26	1.24	JR
14	1.12	1.34	1.25	JR
15	1.23	1.39	1.36	JR
16	1.21	1.36	1.27	JR
17	1.23	1.41	1.25	JR
18	1.08	1.4	1.18	BW
19	1.13	1.26	1.18	BW
20	1.13	1.27	1.14	NE
21	1.13	1.27	1.23	NE
22	1.14	1.25	1.21	BW
23	1.05	1.26	1.19	BW
24	1.1	1.26	1.12	BW
25	1.1	1.31	1.12	NE
26	1.07	1.28	1.19	NE
27	1.04	1.16	1.07	NE
28	1.15	1.37	1.24	NE
29	1.19	1.38	1.04	NE
30	1.18	1.31	1.20	NE
Total				
Average			**1.25**	
MIN	**1.04**			
MAX		**1.91**		

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Initial
	Residual	Residual	Residual	
October	(mg/L)	(mg/L)	(mg/L)	
2023				
1	1.28	1.43	1.33	NE
2	1.29	1.48	1.38	JR
3	1.18	1.46	1.29	JR
4	1.30	1.43	1.37	JR
5	1.30	1.47	1.46	JR
6	1.23	1.37	1.34	JR
7	1.23	1.30	1.28	JR
8	1.23	1.38	1.34	JR
9	1.3	1.47	1.43	JR
10	1.34	1.47	1.39	BW
11	1.25	1.46	1.43	JR
12	1.25	1.36	1.32	BW
13	1.28	1.38	1.31	BW
14	1.3	1.41	1.37	BW
15	1.12	1.42	1.38	BW
16	1.12	1.41	1.17	NE
17	1.25	1.44	1.33	NE
18	1.25	1.47	1.43	NE
19	1.21	1.36	1.23	NE
20	1.29	1.37	1.33	NE
21	1.25	1.41	1.26	NE
22	1.24	1.42	1.28	NE
23	1.33	1.48	1.36	JR
24	1.32	1.48	1.38	JR
25	1.23	1.37	1.27	JR
26	1.19	1.36	1.27	JR
27	1.27	1.38	1.34	JR
28	1.04	1.36	1.18	JR
29	0.99	2.25	1.59	JR
30	1.25	1.51	1.31	JR
31	1.32	1.5	1.43	BW
Total				
Average			**1.34**	
MIN	**0.99**			
MAX		**2.25**		

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Initial
	Residual	Residual	Residual	
November	(mg/L)	(mg/L)	(mg/L)	
2023				
1	1.35	1.47	1.44	BW
2	1.32	1.47	1.37	BW
3	1.20	1.45	1.21	BW
4	1.37	1.54	1.43	BW
5	1.39	1.58	1.48	BW
6	1.43	1.60	1.53	NE
7	1.47	1.65	1.58	NE
8	1.34	1.65	1.54	NE
9	1.35	1.50	1.49	JR
10	1.47	1.62	1.56	NE
11	1.26	1.70	1.65	NE
12	1.25	1.52	1.31	NE
13	1.38	1.52	1.47	JR
14	1.12	1.54	1.53	JR
15	1.11	1.36	1.20	JR
16	1.26	1.47	1.37	JR
17	1.32	1.45	1.37	JR
18	1.25	1.47	1.28	JR
19	1.41	1.58	1.66	JR
20	1.43	1.67	1.56	BW
21	1.43	1.69	1.58	BW
22	1.39	1.60	1.54	BW
23	1.29	1.45	1.34	BW
24	1.25	1.55	1.36	BW
25	1.41	1.58	1.52	BW
26	1.36	1.54	1.43	BW
27	1.41	1.54	1.52	NE
28	1.39	1.54	1.52	NE
29	1.30	1.47	1.39	NE
30	1.33	1.52	1.40	NE
Total				
Average			**1.45**	
MIN	**1.11**			
MAX		**1.7**		

DISTRIBUTION SYSTEM CHLORINE RESIDUALS (LEITH)

Date	MIN	MAX	Actual Free Chlorine	Initial
	Residual	Residual	Residual	
December	(mg/L)	(mg/L)	(mg/L)	
2023				
1	1.34	1.57	1.48	BW
2	1.30	1.49	1.41	JR
3	1.30	1.50	1.43	JR
4	1.36	1.50	1.47	JR
5	1.25	1.42	1.40	JR
6	1.27	1.61	1.47	JR
7	1.31	1.52	1.50	JR
8	1.30	1.44	1.41	JR
9	1.30	1.53	1.43	JR
10	1.35	1.53	1.47	JR
11	1.30	1.55	1.48	BW
12	1.39	1.57	1.51	BW
13	1.34	1.51	1.47	BW
14	1.32	1.58	1.54	BW
15	1.39	1.58	1.50	NE
16	1.41	1.56	1.52	BW
17	1.27	1.56	1.43	BW
18	1.41	1.56	1.53	BW
19	1.29	1.52	1.43	JR
20	1.2	1.38	1.30	NE
21	1.29	1.53	1.50	NE
22	1.27	1.45	1.42	NE
23	1.29	1.49	1.38	NE
24	1.23	1.48	1.43	NE
25	1.17	1.36	1.25	NE
26	1.26	1.41	1.33	JR
27	1.21	1.41	1.32	JR
28	1.20	1.33	1.27	JR
29	1.14	1.43	1.16	JR
30	1.22	1.38	1.23	JR
31	1.21	1.41	1.30	JR
Total				
Average			**1.41**	
MIN	**1.14**			
MAX		**1.61**		

Annual Summary-Distribution Bacteriological Data

WATER WORKS NAME:	Leith Water Distribution
YEAR	2023
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.	11	11	0	11	11	0	5	5	0	1
FEB.	9	9	0	9	9	0	4	4	0	0
MAR.	9	9	0	9	9	0	4	4	0	1
APR.	9	9	0	9	9	0	4	4	0	0
MAY	11	11	0	11	11	0	5	5	0	0
JUN.	9	9	0	9	9	0	4	4	0	1
JUL.	11	11	0	11	11	0	5	5	0	1
AUG.	9	9	0	9	9	0	4	4	0	1
SEPT.	9	9	0	9	9	0	4	4	0	1
OCT.	11	11	0	11	11	0	5	5	0	0
NOV.	9	9	0	9	9	0	4	4	0	1
DEC.	9	9	0	9	9	0	4	4	0	0
TOTAL	**116**	**116**	**0**	**116**	**116**	**0**	**52**	**52**	**0**	1

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 2023
SERVICE POPULATION 382.8
LABORATORIES WHICH PERFORMED ANALYSES SGS Laboratory

MONTH	DISTRIBUTION WATER Trihalomethanes (THM's)								
	NO. OF SAMPLES COLLECTED	THM's (ug/L)	Lead		Alkalinity		pH		HAA's (ug/L)
JAN.									
FEB.	1	36							13.2
MAR.	2		0.17	0.05	77	88	7.22	7.37	
APR.									
MAY	1	75							13.2
JUN.									
JUL.									
AUG.	1	32							17.4
SEPT.	2		0.3	0.05	68	76	7.1	7.14	
OCT.									
NOV.	1	64							35.4
DEC.									
RAA		51.8							19.8
MAC		100							80

MAC = Maximum Acceptable Concentration

2023 Leith Distribution Flow Summary

	Date	Previous Read	Current Read	Metered Consumption	Billing	Avg per Day Consumption	Actual $	Consumption
	yyyy/mm/dd	m3	m3	m3	Days	m3	per m3	$
Start	2023-01-04		160978					
Actual	2023-04-05	160978	169177	8199	91	90.1	$4.60	$37,687.03
Actual	2023-07-08	169177	176910	7733	94	82.3	$3.45	$26,674.67
Actual	2023-10-04	176910	183232	6322	88	71.8	$3.68	$23,252.80
End	2024-01-11	183232	188331	5099	99	51.5	$3.67	$18,727.70
				27,353	**372**	**73.9**	**$3.85**	**$106,342.20**
				Annual	Total Billing	Annual	Annual	Annual
				Consumption	Days	Avg	Avg	Cost

Note:
The Start read was taken from the Owen Sound meter by Meaford E.S Staff, used this value as the first read from Owen Sound for 2023 was a service estimate.

Leith 2023 Water Inventory

Owen Sound	**27,353**	m3
Leith Residential Meters	**15551**	m3
Metered Difference	**11802**	m3
Flushing	1932	m3
Station Leak	5112	m3
Analyzer ReCl2 station	262.8	m3
Total	**7306.8**	**m3**
Difference - Total	4495	m3
Waterloss	4495	m3
	27,353	m3
Percent Waterloss	**16.43%**	

Notes: Analyzer runs about 500ml/min approx.