

Water Treatment Plant March Report 2023 Water Quality Summary

Acronyms

MAC = Maximum acceptable concentration established by Health Canada
AO = Aesthetic objective (no health based limit) suggested by Health Canada
NTU = Nephelometric Turbidity Unit
mg/L = milligrams per litre or one part per million

Health Related

Parameter	Units	Result	MAC
Turbidity	NTU	0.101	0.3
Chloramines	mg/L	1.89	n/a ¹
Nitrate-N	mg/L	0.15	10
Fluoride	mg/L	0.78	1.5
Trihalomethanes	mg/L	0.005	0.1
Aluminum	mg/L	0.0360	2.9
Chromium	mg/L	< 0.0005	0.05
Lead	mg/L	< 0.0001	0.005
Manganese	mg/L	< 0.005	0.12

Non Health Related

Parameter	Units	Result	AO
pH		7.50	7.0 - 10.5
Hardness	mg/L	177	n/a ²
TDS - total dissolved solids	mg/L	221	≤ 500
Sulfate	mg/L	42.2	≤ 500
Sodium	mg/L	14.1	≤ 200
Iron	mg/L	< 0.01	≤ 0.3
Manganese	mg/L	< 0.005	≤ 0.02

¹ Guideline value not necessary due to low toxicity at concentrations found in drinking water. Chloramine residuals in most Canadian drinking water distribution systems are typically below 4 mg/L.

² Although hardness may have significant aesthetic effects, a guideline has not been established because public acceptance of hardness may vary considerably according to the local conditions; major contributor to hardness (calcium & magnesium) are not of direct public health concern

Treated Water - Distribution System

BACTERIOLOGICAL / SECONDARY DISINFECTION

	Mar 6/2023		Mar 13/2023		Mar 20/2023		Mar 27/2023	
	Sample Results		Sample Results		Sample Results		Sample Results	
	Cl ₂	BacT	Cl ₂	BacT	Cl ₂	BacT	Cl ₂	BacT
Sample 1 North Lethbridge	1.80	N			1.86	N	1.56	N
Sample 2 North Lethbridge	1.68	N	1.96	N			1.54	N
Sample 3 North Lethbridge	1.79	N	2.00	N	1.89	N	1.65	N
Sample 4 North Lethbridge								
Sample 5 North Lethbridge			1.61	N				
Sample 6 North Lethbridge			2.08	N			1.64	N
Sample 7 North Lethbridge	1.86	N	1.97	N	1.87	N	1.61	N
Sample 8 North Lethbridge							1.65	N
Sample 9 North Lethbridge	1.29	N					1.24	N
Sample 10 North Lethbridge	1.88	N	2.06	N	1.90	N	1.67	N
Sample 11 North Lethbridge	1.91	N	1.99	N	1.98	N	1.69	N
Sample 12 North Lethbridge	1.82	N					1.51	N
Sample 13 North Lethbridge	1.48	N			1.84	N		
Sample 14 North Lethbridge			2.05	N	1.52	N		
Sample 15 North Lethbridge			1.67	N	1.87	N		
Sample 16 North Lethbridge	1.68	N	1.92	N	1.82	N		
Sample 17 North Lethbridge	1.71	N						
Sample 18 South Lethbridge								
Sample 19 South Lethbridge			1.83	N	1.71	N	1.63	N
Sample 20 South Lethbridge	1.85	N	1.89	N	1.85	N	1.65	N
Sample 21 South Lethbridge					1.72	N		
Sample 22 South Lethbridge								
Sample 23 South Lethbridge	2.02	N	1.98	N	1.92	N	1.97	N

	Mar 7/2023		Mar 14/2023		Mar 21/2023		Mar 27/2023	
	Sample Results		Sample Results		Sample Results		Sample Results	
	Cl ₂	BacT	Cl ₂	BacT	Cl ₂	BacT	Cl ₂	BacT
Sample 23 West Lethbridge	1.65	N	1.73	N			1.52	N
Sample 24 West Lethbridge			1.85	N	1.75	N	1.58	N
Sample 25 West Lethbridge								
Sample 26 West Lethbridge								
Sample 27 West Lethbridge							1.59	N
Sample 28 West Lethbridge	1.81	N			1.72	N	1.57	N
Sample 29 West Lethbridge					1.72	N	1.56	N
Sample 30 West Lethbridge	1.91	N	1.94	N	1.76	N	1.61	N
Sample 31 West Lethbridge							1.44	N
Sample 32 West Lethbridge								
Sample 33 West Lethbridge	1.82	N	1.96	N	1.88	N	1.62	N
Sample 34 West Lethbridge			1.87	N				
Sample 35 West Lethbridge	1.73	N			1.85	N		
Sample 36 South Lethbridge			1.96	N				
Sample 37 South Lethbridge	1.65	N			1.66	N		
Sample 38 South Lethbridge	1.75	N	1.74	N	1.66	N	1.52	N
Sample 39 South Lethbridge	1.83	N	1.97	N			1.65	N
Sample 40 South Lethbridge	1.87	N	1.91	N	1.77	N	1.66	N
Sample 41 South Lethbridge	1.89	N	1.97	N	1.65	N		
Sample 42 South Lethbridge					1.85	N	1.61	N
Sample 43 South Lethbridge	1.62	N	1.87	N				
Sample 44 South Lethbridge	1.45	N			1.45	N		
Sample 45 South Lethbridge	1.82	N	1.95	N	1.83	N	1.59	N

Total Negative (N) = 103
Total Positive (P) = 0
Total Re-Samples = 0

Chlorine Residual Minimum = 1.24 mg/L
Chlorine Residual Maximum = 2.08 mg/L
Chlorine Residual Average = 1.76 mg/L