

Water Treatment Plant

September Report 2022

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	0.061	0.3
Chloramines	mg/L	1.97	n/a ¹
Nitrate-N	mg/L	0.02	10
Fluoride	mg/L	0.79	1.5
Trihalomethanes	mg/L	0.021	0.1
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	136	n/a ²
TDS - total dissolved solids	mg/L	159	≤ 500
Sulfate	mg/L	23.0	≤ 500
Sodium	mg/L	7.2	≤ 200
Iron	mg/L	0.05	0.05
Manganese	mg/L	<0.005	≤ 0.02
Aluminum	mg/L	0.132	n/a ³

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

³ Operational Guidance Value of < 0.1 mg/L total aluminum. There is no consistent, convincing evidence that aluminum in drinking water causes adverse health effects in humans.

Treated Water - Distribution System

BACTERIOLOGICAL / SECONDARY DISINFECTION

	Sep 7/2022		Sep 12/2022		Sep 21/2022		Sep 26/2022	
	Sample Results		Sample Results		Sample Results		Sample Results	
	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T
Sample 1 North Lethbridge	1.57	N	1.48	N	1.53	N		
Sample 2 North Lethbridge	1.64	N			1.37	N		
Sample 3 North Lethbridge	1.64	N	1.60	N	1.53	N	1.63	N
Sample 4 North Lethbridge					1.71	N		
Sample 5 North Lethbridge			1.52	N				
Sample 6 North Lethbridge	1.80	N						
Sample 7 North Lethbridge	1.85	N	1.74	N	1.77	N	1.81	N
Sample 8 North Lethbridge	1.75	N					1.76	N
Sample 9 North Lethbridge	1.57	N	1.13	N	1.57	N		
Sample 10 North Lethbridge	1.62	N	1.59	N	1.77	N	1.61	N
Sample 11 North Lethbridge	1.78	N	1.71	N	1.85	N	1.88	N
Sample 12 North Lethbridge							1.64	N
Sample 13 North Lethbridge					1.24	N	1.02	N
Sample 14 North Lethbridge	1.32	N					1.53	N
Sample 15 North Lethbridge							1.52	N
Sample 16 North Lethbridge			1.90	N			1.47	N
Sample 17 North Lethbridge								
Sample 18 South Lethbridge	1.42	N	1.30	N	1.28	N		
Sample 19 South Lethbridge			1.80	N	1.78	N		
Sample 20 South Lethbridge	1.67	N	1.60	N	1.80	N	1.81	N
Sample 21 South Lethbridge			1.82	N				
Sample 22 South Lethbridge							0.98	N
Sample 23 South Lethbridge	2.05	N	1.94	N	2.02	N	2.06	N

	Sep 6/2022		Sep 13/2022		Sep 20/2022		Sep 26/2022	
	Sample Results		Sample Results		Sample Results		Sample Results	
	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T
Sample 23 West Lethbridge	1.34	N					1.83	N
Sample 24 West Lethbridge	1.29	N	1.32	N	1.42	N		
Sample 25 West Lethbridge							1.64	N
Sample 26 West Lethbridge	1.54	N			1.38	N		
Sample 27 West Lethbridge					1.51	N	1.70	N
Sample 28 West Lethbridge			1.45	N			1.48	N
Sample 29 West Lethbridge	1.57	N			1.46	N	1.57	N
Sample 30 West Lethbridge	1.69	N	1.72	N	1.53	N	1.73	N
Sample 31 West Lethbridge			1.61	N	1.49	N		
Sample 32 West Lethbridge								
Sample 33 West Lethbridge	1.70	N	1.72	N	1.67	N	1.77	N
Sample 34 West Lethbridge	1.61	N	1.65	N			1.67	N
Sample 35 West Lethbridge			1.58	N	1.57	N	1.57	N
Sample 36 South Lethbridge					1.71	N		
Sample 37 South Lethbridge			1.29	N				
Sample 38 South Lethbridge	1.27	N			1.51	N		
Sample 39 South Lethbridge								
Sample 40 South Lethbridge	1.46	N	1.61	N	1.64	N	1.63	N
Sample 41 South Lethbridge			1.52	N	1.56	N	1.57	N
Sample 42 South Lethbridge	1.45	N	1.62	N	1.61	N	1.71	N
Sample 43 South Lethbridge	1.13	N					1.36	N
Sample 44 South Lethbridge			0.97	N				
Sample 45 South Lethbridge	1.31	N	1.39	N				

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

Chlorine Residual Minimum = 0.97 mg/L
 Chlorine Residual Maximum = 2.06 mg/L
 Chlorine Residual Average = 1.58 mg/L