

Water Treatment Plant December 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	0.072	0.3
Chloramines	mg/L	1.89	n/a ¹
Nitrate-N	mg/L	0.08	10
Fluoride	mg/L	0.82	1.5
Trihalomethanes	mg/L	0.010	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		7.62	7.0 - 10.5
Hardness	mg/L	155	n/a ²
TDS - total dissolved solids	mg/L	197	≤ 500
Sulfate	mg/L	35.0	≤ 500
Sodium	mg/L	13.7	≤ 200
Iron	mg/L	<0.01	0.05
Manganese	mg/L	<0.005	≤ 0.02
Aluminum	mg/L	0.043	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

	Dec 5/2022		Dec 12/2022		Dec 13/2022		Dec 19/2022		Dec 28/2022	
	Sample Results		Sample Results		Sample Results		Sample Results		Sample Results	
	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T
Sample 1 North Lethbridge	1.89	N	1.90	N						
Sample 2 North Lethbridge			1.51	N					1.62	N
Sample 3 North Lethbridge	1.89	N	2.00	N			1.70	N	1.74	N
Sample 4 North Lethbridge			2.06	N			1.79	N	1.77	N
Sample 5 North Lethbridge	1.32	N	1.53	N			1.33	N		
Sample 6 North Lethbridge	1.92	N					1.83	N		
Sample 7 North Lethbridge	1.90	N	2.05	N			1.81	N	1.76	N
Sample 8 North Lethbridge			1.90	N			1.77	N		
Sample 9 North Lethbridge			1.11	N						
Sample 10 North Lethbridge	1.84	N					1.81	N		
Sample 11 North Lethbridge	1.91	N	2.00	N			1.85	N	1.78	N
Sample 12 North Lethbridge			1.51	N			1.66	N	1.40	N
Sample 13 North Lethbridge	1.54	N			1.76	N				
Sample 14 North Lethbridge	1.46	N			1.67	N				
Sample 15 North Lethbridge			1.88	N						
Sample 16 North Lethbridge					1.76	N			1.69	N
Sample 17 North Lethbridge							1.64	N		
Sample 18 South Lethbridge	1.60	N								
Sample 19 South Lethbridge					1.95	N			1.76	N
Sample 20 South Lethbridge	1.83	N	1.92	N			1.81	N	1.69	N
Sample 21 South Lethbridge										
Sample 22 South Lethbridge	1.16	N								
Sample 23 South Lethbridge	1.86	N	2.05	N			1.89	N	1.97	N

	Dec 5/2022		Dec 12/2022		Dec 13/2022		Dec 20/2022		Dec 28/2022	
	Sample Results		Sample Results		Sample Results		Sample Results		Sample Results	
	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T	Cl ₂	Bac T
Sample 23 West Lethbridge	1.61	N			1.52	N	1.85	N		
Sample 24 West Lethbridge	1.74	N	1.72	N					1.59	N
Sample 25 West Lethbridge							1.71	N		
Sample 26 West Lethbridge	1.80	N			1.71	N				
Sample 27 West Lethbridge	1.85	N	1.86	N			1.78	N		
Sample 28 West Lethbridge							1.74	N		
Sample 29 West Lethbridge			1.75	N			1.60	N		
Sample 30 West Lethbridge	1.94	N	1.94	N			1.84	N	1.77	N
Sample 31 West Lethbridge	1.82	N			1.80	N				
Sample 32 West Lethbridge	1.69	N								
Sample 33 West Lethbridge	1.88	N	1.92	N			1.80	N	1.68	N
Sample 34 West Lethbridge	1.86	N	1.79	N	1.65	N				
Sample 35 West Lethbridge							1.70	N		
Sample 36 South Lethbridge							1.79	N		
Sample 37 South Lethbridge					1.71	N			1.45	N
Sample 38 South Lethbridge			1.71	N					0.91	N
Sample 39 South Lethbridge					1.84	N			1.78	N
Sample 40 South Lethbridge	1.88	N	1.86	N			1.79	N	1.80	N
Sample 41 South Lethbridge			1.79	N					1.63	N
Sample 42 South Lethbridge	1.84	N			1.86	N	1.76	N	1.69	N
Sample 43 South Lethbridge	1.25	N	1.62	N					1.58	N
Sample 44 South Lethbridge	0.85	N								
Sample 45 South Lethbridge			1.83	N			1.76	N	1.70	N

Total Negative (N) = 106
Total Positive (P) = 0
Total Re-Samples = 0

Chlorine Residual Minimum = 0.85 mg/L
 Chlorine Residual Maximum = 2.06 mg/L
 Chlorine Residual Average = 1.73 mg/L