



Water Treatment Plant

December Report 2020

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	0.045	0.3
Chloramines	mg/L	1.99	n/a ¹
Nitrate-N	mg/L	0.18	10
Fluoride	mg/L	0.80	1.5
Trihalomethanes	mg/L	0.009	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		7.44	7.0 - 10.5
Hardness	mg/L	162	n/a ²
TDS - total dissolved solids	mg/L	201	≤ 500
Sulfate	mg/L	40.6	≤ 500
Sodium	mg/L	12.1	≤ 200
Iron	mg/L	<0.01	0.05
Manganese	mg/L	<0.005	≤ 0.02
Aluminum	mg/L	0.030	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.



City of Lethbridge
Water Treatment Plant

Treated Water - Distribution System

BACTERIOLOGICAL / SECONDARY DISINFECTION

	Dec 1/2020		Dec 7/2020		Dec 15/2020		Dec 21/2020	
	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	1.89	N	1.56	N	1.99	N	1.84	N
Sample 2 North Lethbridge	1.76	N	2.03	N	1.94	N		
Sample 3 North Lethbridge	2.11	N			2.09	N	2.04	N
Sample 4 North Lethbridge								
Sample 5 North Lethbridge								
Sample 6 North Lethbridge								
Sample 7 North Lethbridge	2.03	N	1.95	N	2.09	N	1.93	N
Sample 8 North Lethbridge	2.02	N	1.90	N	2.11	N	1.89	N
Sample 9 North Lethbridge								
Sample 10 North Lethbridge	1.89	N	1.80	N	1.93	N	1.85	N
Sample 11 North Lethbridge								
Sample 12 North Lethbridge	1.69	N					1.63	N
Sample 13 North Lethbridge	1.80	N	1.74	N	1.55	N	1.44	N
Sample 14 North Lethbridge								
Sample 15 North Lethbridge	1.77	N	1.68	N	1.96	N	1.42	N
Sample 16 South Lethbridge	1.90	N	1.68	N	2.00	N	1.88	N
Sample 17 South Lethbridge			1.73	N	2.02	N	1.85	N
Sample 18 South Lethbridge	1.94	N			2.04	N	1.92	N
Sample 19 South Lethbridge	2.06	N	1.88	N	2.09	N	1.93	N
Sample 20 South Lethbridge			1.79	N				
Sample 21 South Lethbridge			1.19	N				
Sample 22 South Lethbridge	2.21	N	2.08	N	2.00	N	2.05	N

	Dec 1/2020		Dec 7/2020		Dec 14/2020		Dec 21/2020	
	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	1.40	N	1.50	N	1.36	N	1.65	N
Sample 24 West Lethbridge	1.72	N	1.83	N	1.85	N	1.78	N
Sample 25 West Lethbridge			1.86	N				
Sample 26 West Lethbridge								
Sample 27 West Lethbridge								
Sample 28 West Lethbridge			1.81	N				
Sample 29 West Lethbridge	1.66	N	1.71	N	1.68	N	1.79	N
Sample 30 West Lethbridge	1.85	N	1.83	N	2.00	N	1.90	N
Sample 31 West Lethbridge								
Sample 32 West Lethbridge								
Sample 33 West Lethbridge	1.96	N	1.94	N	2.05	N	1.91	N
Sample 34 West Lethbridge	1.85	N			2.02	N		
Sample 35 West Lethbridge	1.84	N	1.84	N	2.00	N	1.89	N
Sample 36 South Lethbridge	1.83	N						
Sample 37 South Lethbridge	1.67	N	1.80	N	1.99	N	1.81	N
Sample 38 South Lethbridge								
Sample 39 South Lethbridge								
Sample 40 South Lethbridge	2.07	N	1.98	N	2.05	N	2.12	N
Sample 41 South Lethbridge	1.88	N	1.94	N	2.04	N	2.33	N
Sample 42 South Lethbridge								
Sample 43 South Lethbridge	1.72	N	1.73	N	1.94	N	1.75	N
Sample 44 South Lethbridge	0.44	N						
Sample 45 South Lethbridge					2.07	N	1.74	N

Total Negative (N) = 100
 Total Positive (P) = 0
 Total Re-Samples = 0

Chlorine Residual Minimum = 0.44 mg/L
 Chlorine Residual Maximum = 2.33 mg/L
 Chlorine Residual Average = 1.85 mg/L