WSH Labs (1992) Ltd.

3851B – 21 Street NE • Calgary, Alberta, Canada • T2E 6T5

Phone: (403) 250-9164 • Fax: (403) 291-4597 • www.wshlabs.com

Town of Penhold
1001 Minto St., Box 10
Penhold, AB T0M 1R0

Phone: (403) 886-4265 **Lab Number:** 100780
Fax:
Email: publicworks@townofpenhold.ca **PO Number:**

Sample Info: Treated
910 Fleming Ave
Town Shop

Sampled By: Lisa Harestad
Date Sampled: 12/15/2025
Date Received: 12/15/2025
Date Reported: 12/28/2025

TEST REPORT

Analyte	Units	Result	CDW Guideline Maximum	Detection Limit
Calcium	mg/L	4.3	No Guideline	0.04
Iron	mg/L	0.05	AO: 0.1	0.01
Magnesium	mg/L	1.2	No Guideline	0.02
Manganese	mg/L	0.01	AO: 0.02, MAC: 0.12	0.01
Potassium	mg/L	0.9	No Guideline	0.03
Sodium	mg/L	277	AO: 200	0.04
Bicarbonates	mg/L	558	No Guideline	-
Bromides	mg/L	<0.2	No Guideline	0.2
Carbonates	mg/L	13	No Guideline	-
Chlorides	mg/L	8.2	AO: 250	0.1
Fluorides	mg/L	0.61	MAC: 1.5	0.02
Nitrates as N	mg/L	0.05	MAC: 10	0.04
Nitrites as N	mg/L	<0.05	MAC: 1	0.05
NO_3 + NO_2 as N	mg/L	0.05	No Guideline	0.04
Sulfates	mg/L	133	AO: 500	0.9

Parameter	Units	Result	CDW Guideline Maximum	Detection Limit
Electrical Conductivity (at 25°C)	µS/cm	1153	No Guideline	0.2
pH	pH	8.43	7.0 - 10.5	-
Hardness (as $CaCO_3$)	mg/L	16	No Guideline	0.2
Total Alkalinity (as $CaCO_3$)	mg/L	483	No Guideline	3
P-Alkalinity (as $CaCO_3$)	mg/L	6	No Guideline	-
Hydroxide (as $CaCO_3$)	mg/L	0	No Guideline	-
Total Dissolved Solids (calculated)	mg/L	715	AO: 500	4
Sulfides as S	mg/L	<0.02	AO: 0.05	0.02
Color	TCU	<5	AO: 15	5
Turbidity	NTU	1.9	MAC: 1	0.1
Ammonia Nitrogen	mg/L	<0.5	No Guideline	0.5
Total Organic Carbon	mg/L	4.8	No Guideline	0.5
Bromate	mg/L	<0.0095	MAC: 0.01	0.0095
Chloramines	mg/L	0.2	No Guideline	0.1
Chlorate	mg/L	<0.10	MAC: 1	0.10
Chlorite	mg/L	<0.10	MAC: 1	0.10
UV Absorbance	Abs	0.0520	No Guideline	0.009
Cyanide	mg/L	0.00075	MAC: 0.2	0.00050

Sum of Cations	12.38	TDS / EC Ratio	0.62
Sum of Anions	12.61	Sodium Adsorption Ratio	30.43
Ion Balance	0.98	Saturation Index	0.22

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Trace Metals	Units	Result	CDW Guideline Maximum	Detection Limit
Boron	µg/L	252	MAC: 5000	0.3
Aluminum	µg/L	<0.6	OG: 100, MAC: 2900	0.6
Chromium	µg/L	0.12	MAC: 50	0.05
Copper	µg/L	29.9	AO: 1000, MAC: 2000	0.09
Zinc	µg/L	0.6	AO: 5000	0.3
Arsenic	µg/L	1.73	MAC: 10	0.08
Selenium	µg/L	<0.06	MAC: 50	0.06
Strontium	µg/L	113	MAC: 7000	0.06
Silver	µg/L	<0.04	No Guideline	0.04
Cadmium	µg/L	<0.06	MAC: 7	0.06
Antimony	µg/L	<0.05	MAC: 6	0.05
Barium	µg/L	46.2	MAC: 2000	0.08
Mercury	µg/L	<0.03	MAC: 1	0.03
Lead	µg/L	0.19	MAC: 5	0.09
Uranium	µg/L	0.23	MAC: 20	0.09

Petroleum Hydrocarbons	Units	Result	CDW Guideline Maximum	Detection Limit
BTEX				
Benzene	µg/L	<0.40	MAC: 5	0.40
Toluene	µg/L	<0.40	MAC: 60	0.40
Ethyl Benzene	µg/L	<0.40	MAC:140	0.40
Total Xylenes (o,m&p)	µg/L	<0.89	MAC: 90	0.89

Trihalomethanes	Units	Result	CDW Guideline Maximum	Detection Limit
Trihalomethanes, Total	mg/L	0.035	MAC: 0.1	0.0013
Chloroform	mg/L	0.021	No Guideline	0.0005
Bromodichloromethane	mg/L	0.009	No Guideline	0.0005
Dibromochloromethane	mg/L	0.004	No Guideline	0.0010
Bromoform	mg/L	<0.00050	No Guideline	0.0005

WSH Labs (1992) Ltd. as per: KBW

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Legalities

Lab Number: 100780

(1) The results above are related only to the items analyzed.
(2) Results apply to the sample(s) as received. Date and time sampled are solely provided by the client.
(3) Analytical determinations were performed in Calgary, AB. 3851B - 21 Street NE.
(4) Condition of sample(s) upon receipt:
Acceptable
(5) External provider(s) of laboratory results:
BV Labs

References

(1) Accredited by CALA to ISO/IEC 17025 for specific tests.
(2) Guidelines for Canadian Drinking Water Quality are provided courtesy of Health Canada, March 2025.
https://www.canada.ca/content/dam/hc-sc/documents/services/environmental-workplace-health/reports-publications/water-quality/guidelines-canadian-drinking-water-quality-summary-table/summary-table-pdf-template-eng.pdf

Acronyms & Nomenclatures

< denotes less than detection limit
> denotes greater than
AO = Aesthetic Objective
CDW = Canadian Drinking Water
MAC = Maximum Acceptable Concentration
OG = Operational Guidance Value
TNTC = Too Numerous To Count (>80 colonies)

Standard Methods for the Examination of Water and Wastewater 24th Edition (2023)

Alkalinity. 2320 B. Titration Method.
Ammonia Nitrogen. 4500-NH3 C. Titrimetric Method.
Anions. 4110 B. Ion Chromatography with Chemical Suppression of Eluent Conductivity.
Biochemical Oxygen Demand. 5210 B. 5-Day BOD Test.
Color. 2120 B. Visual Comparison Method.
Conductivity. 2510 B. Laboratory Method.
Fluoride. 4500-F^- C. Ion-Selective Electrode Method.
Hardness. 2340 B. Hardness by Calculation.
Metals. 3125 B. Inductively Coupled Plasma / Mass Spectrometry (ICP-MS) Method.
Organic Carbon. 5310 B. High-Temperature Combustion Method.
pH. 4500-H+ B. Electrometric Method.
Total Kjeldahl Nitrogen / Nitrogen (Organic). 4500-Norg B. Macro-Kjeldahl Method.
Total Suspended Solids. 2540 D. Total Suspended Solids Dried at 103-105°C.
Turbidity. 2130 B. Nephelometric Method.

Hach Methods

Chemical Oxygen Demand. Hach Method 8000.
Chlorine, Total & Free. As per Hach CN66 Test Kit Instructions.
Coliforms, Total and E. coli. (Membrane Filtration). Hach Method 10029.
Ortho-Phosphate. Hach Method 8048.
Sulfides. Hach Method 8131.
Tannin & Lignin. Hach Method 8193.
Total Phosphate. Hach Method 8190.