

Town of Penhold

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

Phone: (403) 886-4265

Lab Number: 98463

Fax:

Email: publicworks@townofpenhold.ca

PO Number:

Sample Info: Distribution
Rec Centre
144 Lincoln St.

Sampled By: Justice P.
Date Sampled: 12/9/2024
Date Received: 12/9/2024
Date Reported: 12/28/2024

TEST REPORT

Analyte	Units	Result	CDW Guideline Maximum	Detection Limit
Calcium	mg/L	3.5	No Guideline	0.02
Iron	mg/L	<0.03	AO: 0.3	0.03
Magnesium	mg/L	0.8	No Guideline	0.02
Manganese	mg/L	<0.01	AO: 0.02, MAC: 0.12	0.01
Potassium	mg/L	0.8	No Guideline	0.02
Sodium	mg/L	292	AO: 200	0.02
Bicarbonates	mg/L	538	No Guideline	-
Bromides	mg/L	<0.2	No Guideline	0.2
Carbonates	mg/L	15	No Guideline	-
Chlorides	mg/L	9.1	AO: 250	0.1
Fluorides	mg/L	0.65	MAC: 1.5	0.02
Nitrates as N	mg/L	0.06	MAC: 10	0.04
Nitrites as N	mg/L	<0.05	MAC: 1	0.05
NO ₃ + NO ₂ as N	mg/L	0.06	No Guideline	0.04
Sulfates	mg/L	121	AO: 500	0.9

Parameter	Units	Result	CDW Guideline Maximum	Detection Limit
Electrical Conductivity (at 25°C)	µS/cm	1151	No Guideline	0.2
pH	pH	8.46	7.0 - 10.5	-
Hardness (as CaCO ₃)	mg/L	12	No Guideline	0.1
Total Alkalinity (as CaCO ₃)	mg/L	471	No Guideline	3
P-Alkalinity (as CaCO ₃)	mg/L	8	No Guideline	-
Hydroxide (as CaCO ₃)	mg/L	0	No Guideline	-
Total Dissolved Solids (calculated)	mg/L	711	AO: 500	4
Sulfides as S	mg/L	<0.02	AO: 0.05	0.02
Turbidity	NTU	1.7	MAC: 1	0.1
Color	TCU	<5	AO: 15	5
Ammonia Nitrogen	mg/L	<0.5	No Guideline	0.5
Total Organic Carbon	mg/L	4.6	No Guideline	0.5
Cyanide	mg/L	0.00067	MAC: 0.2	0.00050
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	0.051	No Guideline	0.009

Sum of Cations	12.96	TDS / EC Ratio	0.62
Sum of Anions	12.13	Sodium Adsorption Ratio	36.61
Ion Balance	1.07	Saturation Index	0.15

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Trace Metals	Units	Result	CDW Guideline Maximum	Detection Limit
Boron	µg/L	219	MAC: 5000	0.5
Aluminum	µg/L	<0.2	OG: 100, MAC: 2900	0.2
Chromium	µg/L	<0.1	MAC: 50	0.1
Copper	µg/L	9.3	AO: 1000, MAC: 2000	0.08
Zinc	µg/L	<0.2	AO: 5000	0.2
Arsenic	µg/L	0.95	MAC: 10	0.04
Selenium	µg/L	<0.04	MAC: 50	0.04
Strontium	µg/L	101	MAC: 7000	0.06
Silver	µg/L	<0.04	No Guideline	0.04
Cadmium	µg/L	<0.05	MAC: 7	0.05
Antimony	µg/L	<0.3	MAC: 6	0.3
Barium	µg/L	38.9	MAC: 2000	0.1
Mercury	µg/L	<0.05	MAC: 1	0.05
Lead	µg/L	0.2	MAC: 5	0.1
Uranium	µg/L	<0.04	MAC: 20	0.04

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	0.037	MAC: 0.1	0.0013
Chloroform	mg/L	0.024	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: _____

Legalities

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- (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, July 2024.

https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/ewh-semt/alt_formats/pdf/pubs/water-eau/sum_guide-res_recom/summary-tables-eng-2024-07.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 23rd Edition (2017)

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.