

ANALYTICAL DATA REPORT

Client Company: Town of Stettler
Client Contact: Rene Lamoureux
Client Project #:

Date Received: Jul 05 2012
Date Reported: Aug 15 2012

Lab File #: 141940

Sample ID: 141940-1, G.T. Hydraulic
Date Sampled: Jul 04 2012

Package Name: Routine Water Potability

Parameter Name	Units	Results	Guideline Limits*	Comments
pH @ 25 °C		7.6	6.5-8.5 (AO)	Acceptable
EC @ 25 °C	mS/cm	0.40		
Dissolved Calcium	mg/L	38.2		
Dissolved Potassium	mg/L	2.13		
Dissolved Magnesium	mg/L	14.1		
Dissolved Sodium	mg/L	19.0	≤200 (AO)	Acceptable
Dissolved Iron	mg/L	<0.002	≤0.3 (AO)	Acceptable
Dissolved Manganese	mg/L	0.0020	≤0.05 (AO)	Acceptable
Chloride	mg/L	7.11	≤250 (AO)	Acceptable
Fluoride	mg/L	0.90	1.5 (MAC)	Pass
Nitrite-N	mg/L	<0.003	1 (MAC)	Pass
Nitrate-N	mg/L	0.121	10 (MAC)	Pass
Nitrate and Nitrite - N	mg/L	0.121	10 (MAC)	Pass
Phosphate	mg/L	<0.01		
Sulphate	mg/L	65.5	≤500 (AO)	Acceptable
Carbonate	mg/L	<0.01		
Bicarbonate	mg/L	158		
Total Alkalinity as CaCO ₃	mg/L	129		
Hardness as CaCO ₃	mg/L	153		
Total Dissolved Solids	mg/L	225	≤500 (AO)	Acceptable
Turbidity	NTU	0.2	0.3/1.0/0.1 ^a	Pass
Color True	TCU	<3	≤15 (AO)	Acceptable
Ionic Balance	%	106		

Package Name: Non-Routine Inorganic Analysis (Primary)

Parameter Name	Units	Results	Guideline Limits*	Comments
Bromate	mg/L	<0.005	<0.01 (MAC)	Pass
Cyanide	mg/L	<0.2	<0.2 (MAC)	Pass

Package Name: Non-Routine Inorganic and Organic Analysis (Secondary)

Parameter Name	Units	Results	Guideline Limits*	Comments
Ammonia-N	mg/L	0.03		
Sulphide (as H ₂ S)	mg/L	<0.005	≤0.05 (AO)	Acceptable
Total Organic Carbon	mg/L	2.36		
Total Xylenes	mg/L	<0.004	≤0.3 (AO)	Acceptable

*CDWQG = Canadian Drinking Water Quality Guidelines, Health Canada 2008

MAC = Maximum Acceptable Concentration (affects health), AO = Aesthetic Objective (does not affect health but affects color, taste, etc.)

^aBased on conventional treatment/slow sand or diatomaceous earth filtration/membrane filtration. No limits apply for well water not under the influence of surface water. For further details and additional guidance restriction, see Guidelines for Canadian Drinking Water Quality (GCDWQ 2008).

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Date Sampled: Jul 04 2012

Package Name: Total Metals

Parameter Name	Units	Results	Guideline Limits*	Comments
Total Aluminum	mg/L	<0.05	≤0.1/0.2 (OG) ^b	Acceptable
Total Antimony	mg/L	<0.001	0.006 (MAC)	Pass
Total Arsenic	mg/L	<0.001	0.01 (MAC)	Pass
Total Barium	mg/L	0.095	1 (MAC)	Pass
Total Boron	mg/L	0.07	5 (MAC)	Pass
Total Cadmium	mg/L	<0.0005	0.005 (MAC)	Pass
Total Chromium	mg/L	<0.02	0.05 (MAC)	Pass
Total Copper	mg/L	0.040	≤1.0 (AO)	Acceptable
Total Iron	mg/L	<0.002	≤0.3 (AO)	Acceptable
Total Lead	mg/L	<0.001	0.01 (MAC)	Pass
Total Manganese	mg/L	0.007	≤0.05 (AO)	Acceptable
Total Mercury	mg/L	<0.0001	0.001 (MAC)	Pass
Total Selenium	mg/L	0.002	0.01 (MAC)	Pass
Total Silver	mg/L	<0.001		
Total Uranium	mg/L	<0.001	0.02 (MAC)	Pass
Total Zinc	mg/L	0.02	≤5.0 (AO)	Acceptable

Package Name: Organic Chemicals & Pesticides (Primary)

Parameter Name	Units	Results	Guideline Limits*	Comments
Atrazine + Metabolites	mg/L	<0.002	0.005 (MAC)	Pass
Benzene	mg/L	<0.002	0.005 (MAC)	Pass
Benzo(a)pyrene	mg/L	<0.000005	0.00001 (MAC)	Pass
Bromoxynil	mg/L	<0.002	0.005 (MAC)	Pass
Carbon Tetrachloride	mg/L	<0.002	0.005 (MAC)	Pass
Chlorobenzene	mg/L	<0.002	0.08 (MAC)	Pass
Chlorpyrifos	mg/L	<0.002	0.09 (MAC)	Pass
Cyanazine	mg/L	<0.002	0.01 (MAC)	Pass
Diazinon	mg/L	<0.002	0.02 (MAC)	Pass
Dicamba	mg/L	<0.002	0.12 (MAC)	Pass
1,2-Dichlorobenzene	mg/L	<0.002	0.2 (MAC)	Pass
1,4-Dichlorobenzene	mg/L	<0.001	0.005 (MAC)	Pass
1,2-Dichlorethane	mg/L	<0.002	0.005 (MAC)	Pass
Dichloromethane	mg/L	<0.005	0.05 (MAC)	Pass
2,4-Dichlorophenol	mg/L	<0.0003	0.9 (MAC)	Pass
2,4-D	mg/L	<0.002	0.1 (MAC)	Pass
Diclofop-methyl	mg/L	<0.002	0.009 (MAC)	Pass
Diuron	mg/L	<0.003	0.15 (MAC)	Pass

*CDWQG = Canadian Drinking Water Quality Guidelines, Health Canada 2008

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^bThis Operational Guideline applies only to drinking water treatment plants using aluminum-based coagulants: conventional systems - 0.1 mg/L, other systems - 0.2 mg/L

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Sample ID: 141940-1, G.T. Hydraulic
Date Sampled: Jul 04 2012

Package Name: Organic Chemicals & Pesticides (Primary) - continues

Parameter Name	Units	Results	Guideline Limits*	Comments
Dimethoate	mg/L	<0.002	0.02 (MAC)	Pass
Ethylbenzene	mg/L	<0.002	≤0.0024 (AO)	Acceptable
Glyphosate	mg/L	<0.02	0.28 (MAC)	Pass
Malathion	mg/L	<0.002	0.19 (MAC)	Pass
Methoxychlor	mg/L	<0.002	0.9 (MAC)	Pass
Metolachlor	mg/L	<0.002	0.05 (MAC)	Pass
Metribuzin	mg/L	<0.002	0.08 (MAC)	Pass
Microcystin	mg/L	<0.00015	0.0015 (MAC)	Pass
Nitritotriacetic Acid (NTA)	mg/L	<0.4	0.4 (MAC)	Pass
Pentachlorophenol	mg/L	<0.002	0.06 (MAC)	Pass
Picloram	mg/L	<0.002	0.19 (MAC)	Pass
Simazine	mg/L	<0.002	0.01 (MAC)	Pass
Terbufos	mg/L	<0.0005	0.001 (MAC)	Pass
Tetrachloroethylene	mg/L	<0.002	0.03 (MAC)	Pass
2,3,4,6-Tetrachlorophenol	mg/L	<0.001	0.1 (MAC)	Pass
Toluene	mg/L	<0.002	≤0.024 (AO)	Acceptable
Triallate	mg/L	<0.002		
Trichloroethylene	mg/L	<0.002	0.005 (MAC)	Pass
2,4,6-Trichlorophenol	mg/L	<0.002	0.005 (MAC)	Pass
Trifluralin	mg/L	<0.002	0.045 (MAC)	Pass
Vinyl Chloride	mg/L	<0.002	0.002 (MAC)	Pass

Package Name: Miscellaneous

Parameter Name	Units	Results	Guideline Limits*	Comments
Total Residual Chlorine ^c	mg/L	3.10		
UV Absorbance	cm ⁻¹	0.06		

Package Name: Trihalomethanes

Parameter Name	Units	Results	Guideline Limits*	Comments
Chloroform	mg/L	0.062		
Bromodichloromethane	mg/L	<0.002		
Dibromochloromethane	mg/L	<0.002		
Bromoform	mg/L	<0.002		
Total Trihalomethanes	mg/L	0.062	0.1(MAC)	Pass

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MAC = Maximum Acceptable Concentration (affects health), AO = Aesthetic Objective (does not affect health but affects color, taste, etc.)

^cTotal residual chlorine analysis is performed in lieu of chloramines analysis.

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Date Received: Jul 05 2012
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Sample ID: 141940-2, Town Office
Date Sampled: Jul 04 2012

Package Name: Trihalomethanes

<u>Parameter Name</u>	<u>Units</u>	<u>Results</u>	<u>Guideline Limits*</u>	<u>Comments</u>
Chloroform	mg/L	0.069		
Bromodichloromethane	mg/L	<0.002		
Dibromochloromethane	mg/L	<0.002		
Bromoform	mg/L	<0.002		
Total Trihalomethanes	mg/L	0.069	0.1(MAC)	Pass

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Date Received: Jul 05 2012
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Lab File #: 141940

Sample ID: 141940-3, WTS
Date Sampled: Jul 04 2012

Package Name: Trihalomethanes

<u>Parameter Name</u>	<u>Units</u>	<u>Results</u>	<u>Guideline Limits*</u>	<u>Comments</u>
Chloroform	mg/L	0.059		
Bromodichloromethane	mg/L	<0.002		
Dibromochloromethane	mg/L	<0.002		
Bromoform	mg/L	<0.002		
Total Trihalomethanes	mg/L	0.059	0.1(MAC)	Pass

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Test Methodologies*:

Alkalinity (water): Based on APHA 2320B

Ammonia: Based on EPA 300.1 & APHA 4110B

Benzo(a)pyrene: Based on EPA 8270C by GC-MS

Bromate: Based on EPA 300.1

Carbonate (water): Based on APHA 2320B

Chlorophenols: Based on EPA 8270C by GC-MS

Cyanide: Based on EPA 335.3

Dissolved Metals: Based on APHA 3030B, APHA 3120 by ICP-OES and APHA 3125 by ICP-MS

EC (water): Based on APHA 2510B & Hach Manual

Hardness (water): Based on APHA 1030F

Major Ions: Based on EPA 300.1 & APHA 4110B

Microcystin: Envirologix Quantitube™ Kit for Microcystin

Pesticides & Herbicides: Based on EPA 8270 by GC-MS

pH (water): Based on APHA 4500-H+B

Sulphide: Based on APHA 4500-SE-Auto-Colorimetry

Volatile Organic Compounds: Based on SW-846 8260

Total Metals (water): Based on APHA 3030E, APHA 3120 by ICP-OES and APHA 3125 by ICP-MS

Total Mercury (water): Based on APHA 3030E and APHA 3112 by Cold Vapor Atomic Fluorescence

TOC: Based on APHA 5310

Total Chlorine: Based on APHA Method 4500-Cl

True Color (water): Based on APHA 2120C

Turbidity (water): Based on APHA 2130B

UV Absorbance (254 nm): Based on APHA 5910B

QA/QC Reviewed By: _____

Lab Manager: A. Salcedo

*Detailed test methodologies available upon request