



# North Island Laboratories

• 2755 B Moray Avenue, Courtenay, B.C. V9N 8M9 Tel: (250) 338-7786 Fax: (250) 338-7553

## Certificate of Analysis

Report To: Public Works  
Village of Cumberland  
Box 340  
Cumberland, BC  
V0R 1S0

Lab Number: 105281  
Date Reported: 9 Sep 13  
Date Completed: 9 Sep 13  
Date Received: 26 Aug 13 14:35

**105281-01 Site # 1 Cumberland W/S treated**  
Sampled By: Mark  
Sampling Date: 26 Aug 13 11:00

Test	Result	Units	Drinking Water Guideline
Alkalinity	22	mg/L (CaCO <sub>3</sub> )	
Chloride	1.3	mg/L	250 AO
Fluoride	<0.05	mg/L	1.5 MAC
Nitrate (N)	<0.05	mg/L	10 MAC
Nitrite (N)	<0.05	mg/L	1 MAC
Sulphate	<0.5	mg/L	500 AO
Colour - Apparent	<5	Colour Units	15
Conductivity	28	uS/cm	
T-Mercury	<0.00001	mg/L	0.001 MAC
pH at 25 C	7.1	pH Units	6.5-8.5
Total Coliforms (DES)	<1.0	MPN/100mL	<1
E. coli (DES)	<1.0	MPN/100mL	<1
Total Dissolved Solids	14	mg/L	500 AO
T-Aluminium	<0.005	mg/L	0.1 Operational Std
T-Antimony	<0.0002	mg/L	0.006 MAC
T-Arsenic	<0.0002	mg/L	0.010 MAC
T-Barium	<0.001	mg/L	1.0 MAC
T-Beryllium	<0.00004	mg/L	
T-Boron	0.015	mg/L	5 MAC
T-Bismuth	<0.001	mg/L	
T-Cadmium	<0.00001	mg/L	0.005 MAC
T-Calcium	4.07	mg/L	
T-Chromium	<0.0004	mg/L	0.05 MAC
T-Cobalt	0.00002	mg/L	
T-Copper	0.017	mg/L	1.0 AO
T-Iron	0.071	mg/L	0.3 AO

AO = Aesthetic Objective; MAC = Max. Allowable Concentration; IMAC = Interim MAC

> = Greater than; < = Less than

Results relate only to samples as submitted. This certificate must not be reproduced, except in its entirety, without written consent from the laboratory.

Canadian Drinking Water Guidelines as listed on Dec. 5th, 2005 and are subject to change. Method uncertainties for specified analyses are available upon request.

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**105281-01 Site # 1**

**Cumberland W/S**

**treated**

Sampled By: Mark

Sampling Date: 26 Aug 13 11:00

Test	Result	Units	Drinking Water Guideline
T-Lead	0.0013	mg/L	0.010 MAC
T-Lithium	<0.001	mg/L	
T-Magnesium	1.04	mg/L	
T-Manganese	0.0101	mg/L	0.05 AO
T-Molybdenum	<0.0001	mg/L	
T-Nickel	<0.001	mg/L	
T-Potassium	<0.10	mg/L	
T-Selenium	<0.0006	mg/L	0.01 MAC
T-Silicon	1.94	mg/L	
T-Silver	<0.00001	mg/L	
T-Sodium	1.8	mg/L	200 AO
T-Strontium	0.01	mg/L	
T-Thallium	<0.00001	mg/L	
T-Tin	0.0002	mg/L	
T-Titanium	<0.0010	mg/L	
T-Uranium	<0.0004	mg/L	
T-Vanadium	0.0001	mg/L	
T-Zinc	0.006	mg/L	5.0 AO
Hardness (CaCO <sub>3</sub> )	14	mg/L	80-100
Bromodichloromethane	<0.001	mg/L	0.016 MAC
Bromoform	<0.001	mg/L	
Chloroform	0.012	mg/L	
Dibromochloromethane	<0.001	mg/L	
Total Trihalomethanes	0.012	mg/L	0.100 MAC
Turbidity	<0.5	NTU's	5 AO

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## 105281-01

Test	Method	Analyst	Date
Alkalinity	Titration to 4.5, APHA 2320 B -modified	NiSL	8/30/2013
Bromodichloromethane	Exova Subcontract-EPA 8260B/5035 - modified	EXL	8/30/2013
Bromoform	Exova Subcontract-EPA 8260B/5035 - modified	EXL	8/30/2013
Chloride	Ion Chromatography, EPA 300.1 -modified	NiSL	8/28/2013
Chloroform	Exova Subcontract-EPA 8260B/5035 - modified	EXL	8/30/2013
Colour - Apparent	Spectrophotometer, APHA 2120 C -modified	NiSL	8/29/2013
Conductivity	Conductivity @25C, APHA 2510 B -modified	NiSL	8/30/2013
Dibromochloromethane	Exova Subcontract-EPA 8260B/5035 - modified	EXL	8/30/2013
E. coli (DES)	Enzyme Substrate, APHA 9223 B -modified	NiSL	8/26/2013
Fluoride	Ion Chromatography, EPA 300.1 -modified	NiSL	8/28/2013
Hardness (CaCO <sub>3</sub> )	Hardness by Calculation, APHA 2340 B -modified	NiSL	9/9/2013
Nitrate (N)	Ion Chromatography, EPA 300.1 -modified	NiSL	8/28/2013
Nitrite (N)	Ion Chromatography, EPA 300.1 -modified	NiSL	8/28/2013
pH at 25 C	Electrometric, APHA 4500 B -modified	NiSL	8/26/2013
Sulphate	Ion Chromatography, EPA 300.1 -modified	NiSL	8/28/2013
T-Aluminium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Antimony	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Arsenic	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Barium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Beryllium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Bismuth	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Boron	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Cadmium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Calcium	Exova Subcontract, ICP, APHA 3120B -modified	EXL	8/29/2013
T-Chromium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Cobalt	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Copper	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Iron	Exova Subcontract, ICP, APHA 3120B -modified	EXL	8/29/2013
T-Lead	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Lithium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Magnesium	Exova Subcontract, ICP, APHA 3120B-modified	EXL	8/29/2013
T-Manganese	Exova Subcontract, ICP, APHA 3120B -modified	EXL	8/29/2013
T-Mercury	Exova Subcontract, Atomic Absorb, MDMES 245.1	EXL	8/30/2013
T-Molybdenum	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Nickel	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013

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T-Potassium	Exova Subcontract, ICP, APHA 3120B	EXL	8/29/2013
T-Selenium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Silicon	Exova Subcontract, ICP, APHA 3120B	EXL	8/29/2013
T-Silver	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Sodium	Exova Subcontract, ICP, APHA 3120B	EXL	8/29/2013
T-Strontium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Thallium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Tin	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Titanium	Exova Subcontract, ICP, APHA 3120B	EXL	8/29/2013
T-Uranium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
T-Vanadium	Exova Subcontract, ICP, APHA 3120B	EXL	8/29/2013
T-Zinc	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	8/29/2013
Total Coliforms (DES)	Enzyme Substrate, APHA 9223 B -modified	NI&L	8/26/2013
Total Dissolved Solids	Exova Subcontract, dried @180C,APHA 2540C-modified	EXL	8/29/2013
Total Trihalomethanes	Exova Subcontract-EPA 8260B/5035 - modified	EXL	8/30/2013
Turbidity	Nephelometric, APHA 2130 B -modified	NI&L	8/28/2013

Approved By: 

Catherine Black, Owner/Operator

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