

# Coal Harbor Water Service

# ANNUAL REPORT OF MONITORING

Report Period	January 1, 2012 to December 31, 2012
Operating Permit Number:	1440189
Drinking Water System Owner	Regional District of Mount Waddington
Drink Water System Contact	
Name	Patrick Donaghy
Phone	250 956-3301
Email	pdonaghy@rdmw.bc.ca

## 1) Microbiological testing completed during this reporting period:

- a) Bacteriological results attached to this report.
- b) Adverse bacteriological results:  None detected

Date	Total Coliform	E.Coli	Reason	Corrective Action

Adverse Results:

## 2) Chemical results for this reporting period:

- a) Most recent chemical analysis attached to this report.
- b) Chemical parameters listed in the Guidelines for Canadian Drinking Water Quality (GCDWQ) are:

- All within GCDWQ.
- Above the GCDWQ and are listed below:

Parameter	Result	Maximum Acceptable Concentration	Aesthetic Objective	Treatment/Corrective Action

**6) Description of the system:**

Sources of raw water	
Groundwater	NA
Surface water	Quatse Lake
Other (specify):	NA

Disinfection methods (check Yes or No boxes that apply)	Yes	No
Chlorination	✓	
Ultraviolet light	✓	
Ozonation		✓
Other (specify):		✓

Does the drinking water system have treatment? Treatment type (check boxes that apply):	Yes	No
Particulate cartridge filters		✓
Membrane filtration		✓
Carbon filter		✓
Sand filtration	✓	
Reverse osmosis		✓
Other (specify):		

**7) Major expenses incurred during the period covered by the report:**

To purchase or install required equipment:	Two large system water meters were installed to monitor for distribution system leaks. Also carried out an indepth inventory for capital asset management plan.
To repair equipment:	
To replace equipment:	
To complete annual maintenance of system: <i>(system flushing, replacement of carbon filters, etc.)</i>	
To complete specialist report (specify):	

**Water Sample Range Report**Vancouver Island Health Authority  
North Island

**Facility Name:** COAL HARBOUR WATER  
**Facility Type:** DWC  
**Date Range:** Jan 1 2012 to Dec 31 2012  
**Date Created:** Jan 30 2013

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>Coal Harbour, BC</u>				
<u>Sewage Plant, Dist</u>				
<u>site, Weekly</u>				
	1/4/2012	L1	L1	
	1/10/2012	L1	L1	
	1/16/2012	T		
	1/25/2012	L1	L1	
	1/30/2012	L1	L1	
	2/8/2012	L1	L1	
	2/13/2012	L1	L1	
	2/22/2012	L1	L1	
	2/27/2012 9:00:00 PM	T		
	3/7/2012	L1	L1	
	3/14/2012	A		
	3/19/2012	L1	L1	
	3/27/2012	L1	L1	
	4/2/2012	L1	L1	
	4/10/2012	L1	L1	
	4/17/2012	A		
	4/24/2012	L1	L1	
	5/1/2012	L1	L1	
	5/9/2012	L1	L1	
	5/14/2012	T		
	5/22/2012	L1	L1	
	5/30/2012	L1	L1	
	6/6/2012	L1	L1	
	6/12/2012	L1	L1	
	6/18/2012	L1	L1	
	6/27/2012	L1	L1	
	7/3/2012	L1	L1	
	7/16/2012	L1	L1	
	7/23/2012	L1	L1	
	8/14/2012	L1	L1	
	8/21/2012	L1	L1	
	8/28/2012	L1	L1	
	9/12/2012	L1	L1	
	9/18/2012	L1	L1	
	9/25/2012	L1	L1	
	10/1/2012	L1	L1	
	10/10/2012	L1	L1	
	10/16/2012	L1	L1	
	10/24/2012	L1	L1	
	10/31/2012	L1	L1	
	11/6/2012	L1	L1	

8/28/2012	L1	L1
9/12/2012	L1	L1
9/18/2012	L1	L1
9/25/2012	L1	L1
10/1/2012	L1	L1
10/10/2012	L1	L1
10/16/2012	L1	L1
10/24/2012	L1	L1
10/31/2012	L1	L1
11/6/2012	L1	L1
11/14/2012	L1	L1
11/26/2012	L1	L1
12/5/2012	L1	L1
<b>Total Positive:</b>	<b>0</b>	<b>0</b>

Result Values:

E - estimated

L - less than

G - greater than

**Interpreting Sample Reports**

In VIHA, the results of drinking water sampling are reported using the following coding system:

**L1** Less than 1 (no detectable bacteria) - Meaning: No bacteria present

**OG** Overgrown - Meaning: Too many background bacteria to give an accurate count

**EST** Estimated Count

and

**A** Sample not tested; Too long in transit

**C** Sample leaked/broken in transit

**D** Sample not tested; No collection date given

**T** Sample submitted unsatisfactory. Exceeded 30 hours holding time, please resample.

**NS** No sample received with requisition



# 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: Patrick Donaghee  
Reg. Dist. of Mt. Waddington  
PO Box 729  
Port McNeill, B.C.  
V0N 2R0

Lab Number: 95781  
Date Reported: 19 Jun 12  
Date Completed: 19 Jun 12  
Date Received: 7 Jun 12 9:40

**95781-01 X6 Quatse Lake**

**Raw water**

Sampled By:

Sampling Date: 6 Jun 12 7:20

Test	Result	Units	Drinking Water Guideline
Alkalinity	<20	mg/L (CaCO <sub>3</sub> )	
Total Ammonia (N)	<0.05	mg/L	
Chloride	3.0	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	1.9	mg/L	500 AO
Colour - Apparent	75	Colour Units	15
pH	6.3	pH Units	6.5-8.5
Conductivity	23	uS/cm	
Sulphide	<0.005	mg/L	0.05 AO
Total Organic Carbon	6.6	mg/L	
Total Organic Nitrogen	0.1	mg/L	
T-Aluminium	0.187	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	0.002	mg/L	1.0 MAC
T-Beryllium	<0.00004	mg/L	
T-Boron	0.006	mg/L	5 MAC
T-Bismuth	<0.001	mg/L	
T-Cadmium	<0.00001	mg/L	0.005 MAC
T-Calcium	1.51	mg/L	
T-Chromium	<0.0004	mg/L	0.05 MAC
T-Cobalt	0.00022	mg/L	
T-Copper	0.003	mg/L	1.0 AO
T-Iron	0.174	mg/L	0.3 AO

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

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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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## 95781-01 X6 Quatse Lake

### Raw water

Sampled By:

Sampling Date: 6 Jun 12 7:20

Test	Result	Units	Drinking Water Guideline
T-Lead	0.0001	mg/L	0.010 MAC
T-Lithium	<0.001	mg/L	
T-Magnesium	0.53	mg/L	
T-Manganese	0.018	mg/L	0.05 AO
T-Molybdenum	<0.0001	mg/L	
T-Nickel	<0.001	mg/L	
T-Phosphorus	0.052	mg/L	
T-Potassium	0.2	mg/L	
T-Selenium	<0.0006	mg/L	0.01 MAC
T-Silicon	0.97	mg/L	
T-Silver	<0.00001	mg/L	
T-Sodium	1.61	mg/L	200 AO
T-Strontium	0.006	mg/L	
T-Thallium	<0.00001	mg/L	
T-Tin	<0.0001	mg/L	
T-Titanium	0.009	mg/L	
T-Uranium	<0.0004	mg/L	
T-Vanadium	0.0003	mg/L	
T-Zinc	0.002	mg/L	5.0 AO
Hardness (CaCO <sub>3</sub> )	6.0	mg/L	80-100
Turbidity	1.0	NTU's	5 AO

## 95781-02 X6 Coal Harbor

### Finished Water

### Potable Water

Sampled By:

Sampling Date: 6 Jun 12 7:20

Test	Result	Units	Drinking Water Guideline
Alkalinity	<20	mg/L (CaCO <sub>3</sub> )	
Total Ammonia (N)	<0.05	mg/L	
Chloride	10.3	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	1.0	mg/L	500 AO

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95781-02 X6 Coal Harbor

Finished Water

Potable Water

Sampled By:

Sampling Date: 6 Jun 12 7:20

Test	Result	Units	Drinking Water Guideline
Colour - Apparent	3	Colour Units	15
pH	6.6	pH Units	6.5-8.5
Conductivity	46	uS/cm	
Sulphide	<0.005	mg/L	0.05 AO
Total Organic Carbon	1.8	mg/L	
Total Organic Nitrogen	<0.08	mg/L	
T-Aluminium	0.039	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	0.002	mg/L	1.0 MAC
T-Beryllium	<0.00004	mg/L	
T-Boron	<0.005	mg/L	5 MAC
T-Bismuth	<0.001	mg/L	
T-Cadmium	<0.00001	mg/L	0.005 MAC
T-Calcium	1.49	mg/L	
T-Chromium	<0.0004	mg/L	0.05 MAC
T-Cobalt	<0.00002	mg/L	
T-Copper	<0.001	mg/L	1.0 AO
T-Iron	0.01	mg/L	0.3 AO
T-Lead	<0.0001	mg/L	0.010 MAC
T-Lithium	<0.001	mg/L	
T-Magnesium	0.47	mg/L	
T-Manganese	<0.005	mg/L	0.05 AO
T-Molybdenum	<0.0001	mg/L	
T-Nickel	<0.001	mg/L	
T-Phosphorus	<0.010	mg/L	
T-Potassium	0.1	mg/L	
T-Selenium	<0.0006	mg/L	0.01 MAC
T-Silicon	0.92	mg/L	
T-Silver	<0.00001	mg/L	
T-Sodium	5.77	mg/L	200 AO
T-Strontium	0.007	mg/L	
T-Thallium	<0.00001	mg/L	
T-Tin	<0.0001	mg/L	

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95781-02 X6 Coal Harbor

Finished Water

Potable Water

Sampled By:

Sampling Date: 6 Jun 12 7:20

Test	Result	Units	Drinking Water Guideline
T-Titanium	0.002	mg/L	
T-Uranium	<0.0004	mg/L	
T-Vanadium	<0.0001	mg/L	
T-Zinc	0.003	mg/L	5.0 AO
Hardness (CaCO3)	6.0	mg/L	80-100
Turbidity	0.6	NTU's	5 AO

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95781-01

Test	Method	Analyst	Date
Alkalinity	Titration to 4.5, APHA 2320 B -modified	NiSL	6/8/2012
Chloride	Ion Chromatography, EPA 300.1 -modified	NiSL	6/7/2012
Colour - Apparent	Spectrophotometer, APHA 2120 C -modified	NiSL	6/7/2012
Conductivity	Conductivity @25C, APHA 2510 B -modified	NiSL	6/7/2012
Fluoride	Ion Chromatography, EPA 300.1 -modified	NiSL	6/7/2012
Hardness (CaCO3)	Hardness by Calculation, APHA 2340 B -modified	NiSL	6/19/2012
Nitrate (N)	Ion Chromatography, EPA 300.1 -modified	NiSL	6/7/2012
Nitrite (N)	Ion Chromatography, EPA 300.1 -modified	NiSL	6/7/2012
pH	Electrometric, APHA 4500 B -modified	NiSL	6/8/2012
Sulphate	Ion Chromatography, EPA 300.1 -modified	NiSL	6/7/2012
Sulphide	Exova Subcontract, Gas Dialysis APHA 4500-S2-E	EXL	6/12/2012
T-Aluminium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Antimony	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Arsenic	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Barium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Beryllium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Bismuth	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Boron	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Cadmium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Calcium	Exova Subcontract, ICP, APHA 3120B -modified	EXL	6/8/2012
T-Chromium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Cobalt	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Copper	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Iron	Exova Subcontract, ICP, APHA 3120B -modified	EXL	6/8/2012
T-Lead	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Lithium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Magnesium	Exova Subcontract, ICP, APHA 3120B-modified	EXL	6/8/2012
T-Manganese	Exova Subcontract, ICP, APHA 3120B -modified	EXL	6/8/2012
T-Molybdenum	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Nickel	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Phosphorus	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Potassium	Exova Subcontract, ICP, APHA 3120B - modified	EXL	6/8/2012
T-Selenium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Silicon	Exova Subcontract, ICP, APHA 3120B - modified	EXL	6/8/2012
T-Silver	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012

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T-Sodium	Exova Subcontract, ICP, APHA 3120B - modified	EXL	6/8/2012
T-Strontium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Thallium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Tin	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Titanium	Exova Subcontract, ICP, APHA 3120B - modified	EXL	6/8/2012
T-Uranium	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
T-Vanadium	Exova Subcontract, ICP, APHA 3120B - modified	EXL	6/8/2012
T-Zinc	Exova Subcontract, ICP-MS,USEPA 200.8-modified	EXL	6/8/2012
Total Ammonia (N)	Exova Subcontract, APHA 4500-NH3 C -modified	EXL	6/12/2012
Total Organic Carbon	Exova Subcontract, Ch.34 SSSA BookSeries5-modified	EXL	6/11/2012
Total Organic Nitrogen	Exova Subcontract, Ch.37 SSSA BookSeries5-modified	EXL	6/11/2012
Turbidity	Nephelometric, APHA 2130 B -modified	NIsL	6/7/2012

Approved By:

Ramona S, Lab Tech

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## REPORT

**TO:** Coal Harbour LCC **FILE NO. 315.04**  
**FROM:** Patrick Donaghy, Operations Manager  
**SUBJECT:** Operations Manager's Report  
**Date:** February 20, 2012

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The following report is a response to a query from the public regarding residues accumulating in household water filters.

As part of its regular monitoring for water quality, the Regional District takes water quality samples at the waste water treatment plant which is downstream to property owners who have expressed concern regarding this issue. This sampling is done on a weekly basis and consistently meets the standards for drinking water in British Columbia.

Regarding private water filters, the Regional District does not recommend filtering or treating water that has already undergone treatment and disinfection. The Regional District also does not regulate or recommend specific treatment systems for private home use. If a home owner decides to use a filtration or treatment device in their home, the Regional District strongly encourages consultation with the National Sanitation Foundation (NSF) for a list of approved devices. If a home owner purchases a treatment device for private home use, the Regional District also strongly recommends that it is maintained according to the manufacturer's instructions. Failure to maintain the equipment properly may make treatment ineffective and/or may create the potential for contamination.

If the LCC has any questions, please contact me at your convenience.

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Patrick Donaghy PEng, MSc

Operations Manager