

NORTH CEDAR IMPROVEMENT
DISTRICT

2009
ANNUAL WATER REPORT

1. INTRODUCTION

The British Columbia Drinking Water Protection Act requires all water purveyors to provide customers (the public) with an annual report on the quality of their drinking water. The North Cedar Improvement District has compiled the following information to help all of its residents to better understand their drinking water.

This report describes where your water comes from, how it is distributed and how we ensure it is safe to drink. If residents have any questions please contact the District office listed in this report and we will be happy to be of assistance.

This annual report covers the period of January 1, 2009 to December 31, 2009.

The North Cedar Improvement District Operates with a permit from the Ministry of Health.

2. NORTH CEDAR IMPROVEMENT DISTRICT –WATER SYSTEM

The North Cedar Improvement District water system is a ground source which is fed by three wells located just off of Cedar Road, along side the Nanaimo River. Our source from the ground is an Aquifer. The fourth well located on Wilkinson road has been left as a “test” well. During 2007 the preliminary requirements for bringing this well online as a production well were completed and in 2008 application was made to the Ministry of Health for approval of this well as a production well. The Ministry of Health gave approval in August 2009 for us to use the Wilkinson road well for a source of water. That approval was given for us to use, but only during dry weather conditions from May – October. Currently this well is not tied into our distribution system.

The North Cedar Improvement District supplies water through a distribution system of water mains to approximately 1300 homes. The system has two water storage reservoirs, one is located at the beginning of Barnes Road and is known as the Barnes Road reservoir, and the other is located on Glyneath Road, off of Ivor Road and is called the Glyneath Road reservoir. The system is gravity fed and is aided by a booster pump station located on Barnes Road for Cedar by the Sea residents as well as a booster pump station located on Lazy Susan Road to aid with fire flows in the Yellow Point Road area.

The water distribution system is operated and managed by District staff who have their water operators certification and education for the maintenance of a public water system

District contacts are: Heather Sarchuk – Administrator – 722-3711
Eli Backmann-Public works superintendent- 716-0223

Our water is disinfected using chlorine solution through two chlorination stations. One is located beside the three wells currently in service and the other is located at the Glyneath Road reservoir site.

3. WATER QUALITY MONITORING PROGRAM

Water sampling and testing is carried out weekly throughout the distribution system. Each week two samples are taken via stand pipes that have been installed at various locations on the water system. The two samples are taken at opposite ends of the system which are then transported to the Health Unit. It is then tested in a lab to ensure our water is safe and meets the British Columbia Drinking Water Protection Act. Water samples are also compared to Health Canada's guidelines for Canadian Drinking Water Quality. There is also a full spectrum sample taken each January that exceeds the parameters set by the regulations for testing that is carried out.

The water quality and testing program has been set up and is carried out in conjunction with the Vancouver Island Health Authority. We test our reservoirs, low, medium and high flowing water mains, and dead end's sites. All test results are monitored at the lab where the test are conducted, by the Vancouver Health Authority as well as NCID.

The maintenance staff also monitor the chlorine residuals on a weekly basis to ensure they meet Health Standards and to ensure they are not exceeding recommended levels. The District also has a turbidity meter that is used in times of stormy weather or extensive flooding when the water can appear cloudy to ensure these levels do not exceed recommended levels.

Attached to this report are all the test results from our water sampling throughout 2009.

Copies of these test results are available at the District office and the full spectrum report is available upon request. Residents are informed on a regular basis of any news regarding our water system in a quarterly news letter.

4. MAINTENANCE AND FLUSHING PROGRAM

The North Cedar Improvement District has a spring and fall flushing program. Flushing is a process of sending a rapid flow of water using a fire hydrant through the piping in order to clean them. This helps improve our water quality by removing sediments and stale water. Regular maintenance and inspections are also performed by the certified waterworks staff. The District plans for replacement and upgrades to the water system as outlined in our Capital Expenditure program. It is the goal of the District to upgrade old distribution lines on an annual basis where funding permits.

Residents are notified in the quarterly news letter on what mains will be flushed both in the spring and in the fall.

5. EMERGENCY RESPONSE PLAN

The Safe Drinking Water Regulation of the Health Act requires that all purveyors of water systems have an emergency response plan (ERP) which we can refer to in case of an emergency, which may present a threat to the health of people drawing their water from that system.

As a purveyor of such a system, we need an ERP to ensure the safety of everyone using water from our system, in case of any kind of an emergency, as well as to meet regulatory requirements.

Our ability to respond rapidly and correctly in the event of an emergency will help prevent unnecessary problems and to protect our residents. It may also help save money by preventing further complications to the water system that could be costly to repair.

The NCID Emergency response Plan includes;

- A list of contacts that could be contacted in the event of an emergency. Regular review and updating of this contact list is undertaken at least every six months.
- List of potential emergency response situations, with action plans. This is in addition to our standard operating procedures and preventive maintenance programs.
- Maps that show the location of mains, critical control points, (i.e. pump houses, shut-off valves, pressure zones) access routes, high risk facilities such as schools are maintained. A Secondary source of this information is on file with the District's engineer.

A full copy of the plan is available at the District office.

6. AVAILABILITY OF THE REPORT.

Residents are notified by the quarterly news letter mailed in the first week of July that this report is available at the District office as well a copy is also posted on our website at www.ncid.bc.ca. There is no cost for a copy of this report.

WATER QUALITY TEST RESULTS

JANUARY 1, 2009 – DECEMBER 31, 2009

Vancouver Island Health Authority
Central Island

Facility Name: NORTH CEDAR IMPROVEMENT DISTRICT
Facility Type: DWT
Date Range: Jan 1 2009 to Dec 31 2009
Date Created: Jan 28 2010

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>North Cedar, Well #1</u>				
<u>RAW WATER,</u>				
<u>Source site, Weekly</u>				
	03-Jun-2009	L1	L1	
	06-Oct-2009	L1	L1	
	Total Positive:	0	0	0

Result Values: E - estimated L - less than G - greater than

Samples that contain total coliform:	0	0.00% of total
Samples that contain e. coli:	0	0.00% of total
Samples that contain fecal coliform:	0	0.00% of total
Number of positive samples in last 30 days:	0/0	
Total number of samples:	2	

Comments:


 Environmental Health Officer
 Jan 28 2010

FOR FURTHER INFORMATION PLEASE CALL: Lucko, Jill (250) 755-6215 Nanaimo

Operator

North Cedar Improvement District
 2100 Yellow Point Road PO BOX 210 NANAIMO STN CEDAR
 Nanaimo, BC
 V9X 1W1

(250) 722-3711

Vancouver Island Health Authority
Central Island

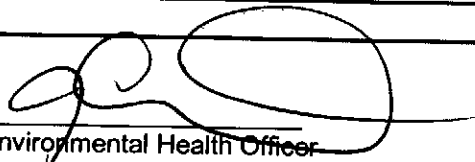
Facility Name: NORTH CEDAR IMPROVEMENT DISTRICT
Facility Type: DWT
Date Range: Jan 1 2009 to Dec 31 2009
Date Created: Jan 28 2010

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>Well #6, North Cedar</u>				
<u>-Well #6 RAW</u>				
<u>WATER, Source</u>				
<u>site, Quarterly</u>				
	03-Jun-2009	2.0	L1	
	06-Oct-2009	<u>2.0</u>	<u>L1</u>	
	Total Positive:	2	0	0

Result Values: E - estimated L - less than G - greater than

Samples that contain total coliform:	2	100.00% of total
Samples that contain e. coli:	0	0.00% of total
Samples that contain fecal coliform:	0	0.00% of total
Number of positive samples in last 30 days:	0/0	
Total number of samples:	2	

Comments:



Environmental Health Officer
Jan 28 2010

FOR FURTHER INFORMATION PLEASE CALL: Lucko, Jill (250) 755-6215 Nanaimo

Operator

North Cedar Improvement District
2100 Yellow Point Road PO BOX 210 NANAIMO STN CEDAR
Nanaimo, BC
V9X 1W1

(250) 722-3711

Vancouver Island Health Authority
Central Island

Facility Name: NORTH CEDAR IMPROVEMENT DISTRICT
Facility Type: DWT
Date Range: Jan 1 2009 to Dec 31 2009
Date Created: Jan 28 2010

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>Well #3, North Cedar-Well #3 RAW WATER, Source site, Weekly</u>	03-Jun-2009	L1	L1	
	06-Oct-2009	<u>L1</u>	<u>L1</u>	
	Total Positive:	0	0	0

Result Values: **E - estimated** **L - less than** **G - greater than**

Samples that contain total coliform:	0	0.00% of total
Samples that contain e. coli:	0	0.00% of total
Samples that contain fecal coliform:	0	0.00% of total
Number of positive samples in last 30 days:	0/0	
Total number of samples:	2	

Comments:


 Environmental Health Officer
 Jan 28 2010

FOR FURTHER INFORMATION PLEASE CALL: Lucko, Jill (250) 755-6215 Nanaimo

Operator

North Cedar Improvement District
 2100 Yellow Point Road PO BOX 210 NANAIMO STN CEDAR
 Nanaimo, BC
 V9X 1W1

(250) 722-3711

Water Sample Range Report
 Vancouver Island Health Authority
 Central Island


Facility Name: NORTH CEDAR IMPROVEMENT DISTRICT
Facility Type: DWT
Date Range: Jan 1 2009 to Dec 31 2009
Date Created: Jan 28 2010

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>WELL #1, WELL # 1</u> <u>FLOODED RAW</u> <u>WATER, Source</u> <u>site, No Regular</u> <u>Sampling</u>				
<u>Well #6, WELL # 6</u> <u>FLOODED RAW</u> <u>WATER, Source</u> <u>site, No Regular</u> <u>Sampling</u>				
<u>Well # 3, WELL # 3</u> <u>FLOODED RAW</u> <u>WATER, Source</u> <u>site, No Regular</u> <u>Sampling</u>	20-Nov-2009	<u>26.2</u>	<u>L1</u>	
	Total Positive:	1	0	0

Result Values: E - estimated L - less than G - greater than

Samples that contain total coliform:	1	100.00% of total
Samples that contain e. coli:	0	0.00% of total
Samples that contain fecal coliform:	0	0.00% of total
Number of positive samples in last 30 days:	0/0	
Total number of samples:	1	

Comments:


Environmental Health Officer
Jan 28 2010

FOR FURTHER INFORMATION PLEASE CALL: Lucko, Jill (250) 755-6215 Nanaimo

Operator

North Cedar Improvement District
2100 Yellow Point Road PO BOX 210 NANAIMO STN CEDAR
Nanaimo, BC
V9X 1W1

(250) 722-3711

Vancouver Island Health Authority
Central Island

Facility Name: NORTH CEDAR IMPROVEMENT DISTRICT
Facility Type: DWT
Date Range: Jan 1 2009 to Dec 31 2009
Date Created: Jan 28 2010

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>Booster Station,</u>				
<u>Booster Station -</u>				
<u>Barnes Road, Dist.</u>				
<u>site, Monthly</u>				
	27-Jan-2009	L1	L1	
	24-Feb-2009	L1	L1	
	24-Mar-2009	L1	L1	
	28-Apr-2009	L1	L1	
	26-May-2009	L1	L1	
	23-Jun-2009	L1	L1	
	28-Jul-2009	L1	L1	
	25-Aug-2009	L1	L1	
	22-Sep-2009	L1	L1	
	27-Oct-2009	L1	L1	
	24-Nov-2009	L1	L1	
	15-Dec-2009	<u>L1</u>	<u>L1</u>	
	Total Positive:	0	0	0
<u>Millway Store,</u>				
<u>Mcmillan Road,</u>				
<u>Cedar, B.C.,</u>				
<u>Mcmillan Road, Dist.</u>				
<u>site, Monthly</u>				
	20-Jan-2009	L1	L1	
	17-Feb-2009	L1	L1	
	17-Mar-2009	L1	L1	
	21-Apr-2009	L1	L1	
	19-May-2009	L1	L1	
	16-Jun-2009	L1	L1	
	21-Jul-2009	L1	L1	
	18-Aug-2009	L1	L1	
	15-Sep-2009	L1	L1	
	20-Oct-2009	L1	L1	
	17-Nov-2009	L1	L1	
	15-Dec-2009	<u>L1</u>	<u>L1</u>	
	Total Positive:	0	0	0
<u>Aros/Wilkenson</u>				
<u>Road,</u>				
<u>Aros/Wilkenson</u>				
<u>Road, Dist. site,</u>				
<u>Monthly</u>				
	13-Jan-2009	L1	L1	
	10-Feb-2009	L1	L1	
	10-Mar-2009	L1	L1	
	14-Apr-2009	L1	L1	

09-Jun-2009	L1	L1	
14-Jul-2009	L1	L1	
11-Aug-2009	L1	L1	
08-Sep-2009	L1	L1	
13-Oct-2009	L1	L1	
12-Nov-2009	L1	L1	
08-Dec-2009	<u>L1</u>	<u>L1</u>	
Total Positive:	0	0	0

Cedar Road, Cedar.
B.C., Cedar Road.
Dist. site, Monthly

13-Jan-2009	L1	L1	
10-Feb-2009	L1	L1	
10-Mar-2009	L1	L1	
14-Apr-2009	L1	L1	
12-May-2009	L1	L1	
09-Jun-2009	L1	L1	
14-Jul-2009	L1	L1	
11-Aug-2009	L1	L1	
08-Sep-2009	L1	L1	
13-Oct-2009	L1	L1	
12-Nov-2009	L1	L1	
08-Dec-2009	<u>L1</u>	<u>L1</u>	
Total Positive:	0	0	0

NORTH CEDAR.
Crabapple Way.
Dist. site, Monthly

06-Jan-2009	L1	L1	
03-Feb-2009	L1	L1	
03-Mar-2009	L1	L1	
07-Apr-2009	L1	L1	
05-May-2009	L1	L1	
02-Jun-2009	L1	L1	
07-Jul-2009	L1	L1	
04-Aug-2009	L1	L1	
01-Sep-2009	L1	L1	
06-Oct-2009	L1	L1	
03-Nov-2009	L1	L1	
01-Dec-2009	<u>L1</u>	<u>L1</u>	
Total Positive:	0	0	0

Chartwell Rd.
Chartwell Rd, Dist.
site, Monthly

20-Jan-2009	L1	L1	
17-Feb-2009	L1	L1	
17-Mar-2009	L1	L1	
21-Apr-2009	L1	L1	
19-May-2009	L1	L1	
16-Jun-2009	L1	L1	
21-Jul-2009	L1	L1	
18-Aug-2009	L1	L1	
15-Sep-2009	L1	L1	
20-Oct-2009	L1	L1	
17-Nov-2009	L1	L1	

Total Positive: 0 0 0

north cedar, Firehall
2100 Yellow Point
Rd, Dist. site,
Monthly

06-Jan-2009	L1	L1	
03-Feb-2009	L1	L1	
03-Mar-2009	L1	L1	
07-Apr-2009	L1	L1	
05-May-2009	L1	L1	
02-Jun-2009	L1	L1	
07-Jul-2009	L1	L1	
04-Aug-2009	L1	L1	
01-Sep-2009	L1	L1	
06-Oct-2009	L1	L1	
03-Nov-2009	L1	L1	
01-Dec-2009	<u>L1</u>	<u>L1</u>	
Total Positive:	0	0	0

1533 MUROCH
ROAD, 1533
MURDOCH ROAD
NORTH CEDAR
IMPROVEMENT
DISTRICT, Dist. site,
Monthly

27-Jan-2009	L1	L1	
24-Feb-2009	L1	L1	
24-Mar-2009	L1	L1	
28-Apr-2009	L1	L1	
26-May-2009	L1	L1	
23-Jun-2009	L1	L1	
28-Jul-2009	L1	L1	
25-Aug-2009	L1	L1	
22-Sep-2009	L1	L1	
27-Oct-2009	L1	L1	
24-Nov-2009	L1	L1	
15-Dec-2009	<u>L1</u>	<u>L1</u>	
Total Positive:	0	0	0

AUDIT NORTH
CEDAR
WATERWORKS,
Dist. site, Annually

17-Dec-2009	<u>L1</u>	<u>L1</u>	
Total Positive:	0	0	0

1694 Cedar Road,
1694 Cedar Road,
Dist. site, Weekly

02-Dec-2009	L1	L1	
07-Dec-2009	L1	L1	
08-Dec-2009	L1	L1	
09-Dec-2009	L1	L1	
14-Dec-2009	L1	L1	

16-Dec-2009 L1 L1
Total Positive: 0 0

1694A Cedar Road.
1694A Cedar Road.
Dist. site, Weekly

1694B Cedar Road.
1694B Cedar Road.
Dist. site, Weekly

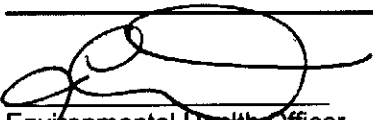
1694C Cedar Road.
1694C Cedar Road.
Dist. site, Weekly

Result Values: E - estimated L - less than G - greater than

Samples that contain total coliform:	0	0.00% of total
Samples that contain e. coli:	0	0.00% of total
Samples that contain fecal coliform:	0	0.00% of total
Number of positive samples in last 30 days:	0/14	
Total number of samples:	104	

Comments:

Satisfactory Results.


Environmental Health Officer
Jan 28 2010

FOR FURTHER INFORMATION PLEASE CALL: Lucko, Jill (250) 755-6215 Nanaimo

Operator

North Cedar Improvement District
2100 Yellow Point Road PO BOX 210 NANAIMO STN CEDAR
Nanaimo, BC
V9X 1W1

(250) 722-3711



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: North Cedar Improvement District
PO Box 210
Cedar, BC
V9X 1W1

Lab Number: 79826
Date Reported: 23 Apr 10
Date Completed: 23 Apr 10
Date Received: 14 Apr 10 11:06

79826-01 1892 York Rd.

Well, 33'

Well # 1

Sampled By: E. Backmann
Sampling Date: 14 Apr 10 9:45

Test	Result	Units	Drinking Water Guideline
Alkalinity	34	mg/L	
Colour - Apparent	<5	Colour units	15 AO
Conductivity	88.6	uS	
Hardness (CaCO3)	31	mg/L	80-100
pH	6.4	pH Units	6.5-8.5
Total Dissolved Solids	54	mg/L	500 AO
Turbidity	<0.5	NTU's	5 AO
Chloride	4.3	mg/L	250 AO
Fluoride	<1.0	mg/L	1.5 MAC
Nitrate (N)	<0.1	mg/L	10 MAC
Nitrite (N)	<0.1	mg/L	3.2 MAC
Sulphate	3.1	mg/L	500 AO
T-Aluminium	0.006	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	0.009	mg/L	1.0 MAC
T-Boron	0.02	mg/L	5 IMAC
T-Cadmium	<0.00001	mg/L	0.005 MAC
T-Calcium	9.68	mg/L	
T-Chromium	<0.0004	mg/L	0.05 MAC
T-Copper	0.007	mg/L	1.0 AO
T-Iron	<0.01	mg/L	0.3 AO
T-Lead	0.0069	mg/L	0.010 MAC
T-Lithium	<0.001	mg/L	
T-Magnesium	1.6	mg/L	
T-Manganese	0.0006	mg/L	0.05 AO
T-Mercury	<0.01	ug/L	1 ug/L MAC

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

23/04/2010 10:52

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North Island Laboratories

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

79826-01 1892 York Rd.
Sampled By: E. Backmann
Sampling Date: 14 Apr 10 9:45

Well, 33'

Well # 1

Test	Result	Units	Drinking Water Guideline
T-Nickel	<0.001	mg/L	
T-Phosphorus	<0.01	mg/L	
T-Potassium	0.2	mg/L	
T-Selenium	<0.0006	mg/L	0.01 MAC
T-Silver	<0.00001	mg/L	
T-Sodium	4.74	mg/L	200 AO
T-Uranium	<0.0004	mg/L	0.02 MAC
T-Zinc	0.042	mg/L	5 AO
(Total Coliforms (DES)	6.4	MPN/100mL	<1) <u>see next page</u>
E. coli (DES)	<1.0	MPN/100mL	<1) <u>for retest</u>

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

23/04/2010 10:52

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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: North Cedar Improvement District
PO Box 210
Cedar, BC
V9X 1W1

Lab Number: 80079
Date Reported: 29 Apr 10
Date Completed: 29 Apr 10
Date Received: 28 Apr 10 10:35

80079-01 #1 Well

Well head

Sampled By:

Sampling Date: 28 Jan 10 10:15

Test	Result	Units	Drinking Water Guideline
Total Coliforms (DES)	<1.0	MPN/100mL	<1
E. coli (DES)	<1.0	MPN/100mL	<1

80079-01

For further information regarding sampling, lab results and well disinfection, please check our web site: <http://www.nilabs.com>. For information on wells and ground water see: www.wellwaterprotection.bc.ca
We suggest the following Health Canada website for further information regarding the latest drinking water quality guidelines to help you assess your results:
<http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/index-eng.php>

Total Coliform: The Total Coliform group (of micro-organisms) includes: The fecal coliform (E.coli), which are common to the intestinal tract of both man and animals, and the non-fecal coliforms that are naturally present in soils and on vegetation. The precise sanitary significance of the Total Coliform test may be difficult to establish. The test is offered as an indicator of bacterial contamination.

E.coli: E.coli has been shown to be an indicator of the potential presence of enteric pathogens in water. The maximum acceptable concentration (MAC) of E. coli in drinking water is none detectable per 100 mL.
Any untreated supply that contains E.coli should receive disinfection.

Test	Method	Analyst	Date
E. coli (DES)	Colilert 18	NiSL	28/04/2010
Total Coliforms (DES)	Colilert 18	NiSL	28/04/2010

Approved By: 
Catherine Black, Owner/Operator

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

29/04/2010 16:06

Page 1 of 1



North Island Laboratories

• 9755 B Moray Avenue, Courtenay, B.C. V9N 8M9 Tel: (250) 338-7786 Fax: (250) 338-7553

79826-01

For further information regarding sampling, lab results and well disinfection, please check our web site: <http://www.nilabs.com>. For information on wells and ground water see: www.wellwaterprotection.bc.ca
We suggest the following Health Canada website for further information regarding the latest drinking water quality guidelines to help you assess your results:
http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/doc_sup-appui-eng.php

Total Coliform: The Total Coliform group (of micro-organisms) includes: The fecal coliform, which are common to the intestinal tract of both man and animals, and the non-fecal coliforms that are naturally present in soils and on vegetation. The precise sanitary significance of the Total Coliform test may be difficult to establish. The test is offered as an indicator of bacterial contamination.

E.coli: The E.coli test has been shown to be an indicator of the potential presence of enteric pathogens in water. Because it is relatively specific for fecal contamination, the E.coli measurement is preferred for monitoring raw (untreated i.e. wells) water quality and for indicating the potential presence of pathogens at source. Any untreated supply that contains E.coli should receive disinfection.

Test	Method	Analyst	Date
Alkalinity	Titration to 4.5	NIsL	15/04/2010
Chloride	Ion Chromatography	NIsL	15/04/2010
Colour - Apparent	Exova Subcontract Exova Subcontract	EXL	20/04/2010
Conductivity	Conductivity meter	NIsL	16/04/2010
E. coli (DES)	Colilert 18	NIsL	14/04/2010
Fluoride	Ion Chromatography	NIsL	15/04/2010
Hardness (CaCO ₃)	calc		
Nitrate (N)	Ion Chromatography	NIsL	15/04/2010
Nitrite (N)	Ion Chromatography	NIsL	15/04/2010
pH	pH meter	NIsL	15/04/2010
Sulphate	Ion Chromatography	NIsL	15/04/2010
T-Aluminium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Antimony	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Arsenic	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Barium	ICP-MS, USEPA 200.8 Exovat Subcontract	EXL	20/04/2010
T-Boron	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Cadmium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Calcium	ICP, APHA 3120B Exova Subcontract	EXL	20/04/2010
T-Chromium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Copper	ICP-MS, USEPA 200.8 Exovat Subcontract	EXL	20/04/2010
T-Iron	ICP, APHA 3120B Exova Subcontract	EXL	20/04/2010

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T-Lead	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Lithium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Magnesium	ICP, APHA 3120B Exova Subcontract	EXL	20/04/2010
T-Manganese	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Mercury	CVAAS Exova Subcontract	EXL	20/04/2010
T-Nickel	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Phosphorus	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Potassium	ICP, APHA 3120B Exova Subcontract	EXL	20/04/2010
T-Selenium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Silver	ICP-MS, USEPA 200.8 Exovat Subcontract	EXL	20/04/2010
T-Sodium	ICP, APHA 3120B Exova Subcontract	EXL	20/04/2010
T-Uranium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Zinc	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
Total Coliforms (DES)	Colilert 18	NIsL	14/04/2010
Total Dissolved Solids	gravimetric Norwest Subcontract	EXL	20/04/2010
Turbidity	Nephelometric	NIsL	15/04/2010

Approved By:

Catherine Black, Owner/Operator

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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: North Cedar Improvement District
PO Box 210
Cedar, BC
V9X 1W1

Lab Number: 79827
Date Reported: 23 Apr 10
Date Completed: 23 Apr 10
Date Received: 14 Apr 10 11:11

79827-01 1892 York Rd.

Well, 35'

Well, # 3

Sampled By: E. Backmann

Sampling Date: 14 Apr 10 9:55

Test	Result	Units	Drinking Water Guideline
Alkalinity	24	mg/L	
Colour - Apparent	<5	Colour units	15 AO
Conductivity	126	uS	
Hardness (CaCO ₃)	26	mg/L	80-100
pH	6.6	pH Units	6.5-8.5
Total Dissolved Solids	62	mg/L	500 AO
Turbidity	<0.5	NTU's	5 AO
Chloride	17.3	mg/L	250 AO
Fluoride	<1.0	mg/L	1.5 MAC
Nitrate (N)	0.2	mg/L	10 MAC
Nitrite (N)	<0.1	mg/L	3.2 MAC
Sulphate	5.1	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	0.007	mg/L	1.0 MAC
T-Boron	0.039	mg/L	5 IMAC
T-Cadmium	0.00002	mg/L	0.005 MAC
T-Calcium	8.43	mg/L	
T-Chromium	0.0018	mg/L	0.05 MAC
T-Copper	0.008	mg/L	1.0 AO
T-Iron	0.024	mg/L	0.3 AO
T-Lead	0.0059	mg/L	0.010 MAC
T-Lithium	0.003	mg/L	
T-Magnesium	1.12	mg/L	
T-Manganese	0.0083	mg/L	0.05 AO
T-Mercury	0.02	ug/L	1 ug/L MAC

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79827-01 1892 York Rd.

Well, 35'

Well, # 3

Sampled By: E. Backmann

Sampling Date: 14 Apr 10 9:55

Test	Result	Units	Drinking Water Guideline
T-Nickel	<0.001	mg/L	
T-Phosphorus	0.012	mg/L	
T-Potassium	0.2	mg/L	
T-Selenium	<0.0006	mg/L	0.01 MAC
T-Silver	<0.00001	mg/L	
T-Sodium	12.4	mg/L	200 AO
T-Uranium	<0.0004	mg/L	0.02 MAC
T-Zinc	0.121	mg/L	5 AO
Total Coliforms (DES)	<1.0	MPN/100mL	<1
E. coli (DES)	<1.0	MPN/100mL	<1

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

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North Island Laboratories

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79827-01

Test	Method	Analyst	Date
Alkalinity	Titration to 4.5	NIsL	15/04/2010
Chloride	Ion Chromatography	NIsL	15/04/2010
Colour - Apparent	Exova Subcontract Exova Subcontract	EXL	20/04/2010
Conductivity	Conductivity meter	NIsL	16/04/2010
E. coli (DES)	Colilert 18	NIsL	14/04/2010
Fluoride	Ion Chromatography	NIsL	15/04/2010
Hardness (CaCO ₃)	calc		
Nitrate (N)	Ion Chromatography	NIsL	15/04/2010
Nitrite (N)	Ion Chromatography	NIsL	15/04/2010
pH	pH meter	NIsL	15/04/2010
Sulphate	Ion Chromatography	NIsL	15/04/2010
T-Aluminium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Antimony	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Arsenic	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Barium	ICP-MS, USEPA 200.8 Exovat Subcontract	EXL	20/04/2010
T-Boron	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Cadmium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Calcium	ICP, APHA 3120B Exova Subcontract	EXL	20/04/2010
T-Chromium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Copper	ICP-MS, USEPA 200.8 Exovat Subcontract	EXL	20/04/2010
T-Iron	ICP, APHA 3120B Exova Subcontract	EXL	20/04/2010
T-Lead	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Lithium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Magnesium	ICP, APHA 3120B Exova Subcontract	EXL	20/04/2010
T-Manganese	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Mercury	CVAAS Exova Subcontract	EXL	20/04/2010
T-Nickel	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Phosphorus	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Potassium	ICP, APHA 3120B Exova Subcontract	EXL	20/04/2010
T-Selenium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Silver	ICP-MS, USEPA 200.8 Exovat Subcontract	EXL	20/04/2010
T-Sodium	ICP, APHA 3120B Exova Subcontract	EXL	20/04/2010
T-Uranium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
T-Zinc	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	20/04/2010
Total Coliforms (DES)	Colilert 18	NIsL	14/04/2010

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

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Total Dissolved Solids	gravimetric Norwest Subcontract	EXL	20/04/2010
Turbidity	Nephelometric	NiSL	15/04/2010

Approved By: *Catherine Black*
Catherine Black, Owner/Operator

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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: North Cedar Improvement District
PO Box 210
Cedar, BC
V9X 1W1

Lab Number: 79825
Date Reported: 23 Apr 10
Date Completed: 23 Apr 10
Date Received: 14 Apr 10 11:04

79825-01 1892 York Rd.

Well, 38

Well #6

Sampled By: E. Bachman

Sampling Date: 14 Apr 10 10:10

Test	Result	Units	Drinking Water Guideline
Alkalinity	23	mg/L	
Colour - Apparent	<5	Colour units	15 AO
Conductivity	70	uS	
Hardness (CaCO3)	23	mg/L	80-100
pH	6.6	pH Units	6.5-8.5
Total Dissolved Solids	34	mg/L	500 AO
Turbidity	<0.5	NTU's	5 AO
Chloride	5.6	mg/L	250 AO
Fluoride	<1.0	mg/L	1.5 MAC
Nitrate (N)	0.2	mg/L	10 MAC
Nitrite (N)	<0.1	mg/L	3.2 MAC
Sulphate	<2.0	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	0.005	mg/L	1.0 MAC
T-Boron	0.012	mg/L	5 IMAC
T-Cadmium	<0.00001	mg/L	0.005 MAC
T-Calcium	7.58	mg/L	
T-Chromium	<0.0004	mg/L	0.05 MAC
T-Copper	0.002	mg/L	1.0 AO
T-Iron	0.014	mg/L	0.3 AO
T-Lead	0.0007	mg/L	0.010 MAC
T-Lithium	<0.001	mg/L	
T-Magnesium	1	mg/L	
T-Manganese	0.002	mg/L	0.05 AO
T-Mercury	<0.01	ug/L	1 ug/L MAC

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North Island Laboratories

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79825-01 1892 York Rd.

Well, 38

Well #6

Sampled By: E. Bachman

Sampling Date: 14 Apr 10 10:10

Test	Result	Units	Drinking Water Guideline
T-Nickel	<0.001	mg/L	
T-Phosphorus	<0.01	mg/L	
T-Potassium	0.1	mg/L	
T-Selenium	<0.0006	mg/L	0.01 MAC
T-Silver	<0.00001	mg/L	
T-Sodium	3.99	mg/L	200 AO
T-Uranium	<0.0004	mg/L	0.02 MAC
T-Zinc	0.048	mg/L	5 AO
Total Coliforms (DES)	<1.0	MPN/100mL	<1
E. coli (DES)	<1.0	MPN/100mL	<1

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

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79825-01

For further information regarding sampling, lab results and well disinfection, please check our web site: <http://www.nilabs.com>. For information on wells and ground water see: www.wellwaterprotection.bc.ca We suggest the following Health Canada website for further information regarding the latest drinking water quality guidelines to help you assess your results: http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/doc_sup-appui-eng.php

Total Coliform: The Total Coliform group (of micro-organisms) includes: The fecal coliform, which are common to the intestinal tract of both man and animals, and the non-fecal coliforms that are naturally present in soils and on vegetation. The precise sanitary significance of the Total Coliform test may be difficult to establish. The test is offered as an indicator of bacterial contamination.

E.coli: The E.coli test has been shown to be an indicator of the potential presence of enteric pathogens in water. Because it is relatively specific for fecal contamination, the E.coli measurement is preferred for monitoring raw (untreated i.e. wells) water quality and for indicating the potential presence of pathogens at source. Any untreated supply that contains E.coli should receive disinfection.

Test	Method	Analyst	Date
Alkalinity	Titration to 4.5	NIsL	15/04/2010
Chloride	Ion Chromatography	NIsL	15/04/2010
Colour - Apparent	Exova Subcontract Exova Subcontract	EXL	19/04/2010
Conductivity	Conductivity meter	NIsL	16/04/2010
E. coli (DES)	Colilert 18	NIsL	14/04/2010
Fluoride	Ion Chromatography	NIsL	15/04/2010
Hardness (CaCO3)	calc		
Nitrate (N)	Ion Chromatography	NIsL	15/04/2010
Nitrite (N)	Ion Chromatography	NIsL	15/04/2010
pH	pH meter	NIsL	15/04/2010
Sulphate	Ion Chromatography	NIsL	15/04/2010
T-Aluminium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Antimony	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Arsenic	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Barium	ICP-MS, USEPA 200.8 Exovat Subcontract	EXL	19/04/2010
T-Boron	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Cadmium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Calcium	ICP, APHA 3120B Exova Subcontract	EXL	19/04/2010
T-Chromium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Copper	ICP-MS, USEPA 200.8 Exovat Subcontract	EXL	19/04/2010
T-Iron	ICP, APHA 3120B Exova Subcontract	EXL	19/04/2010

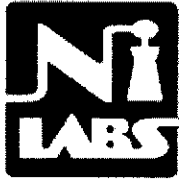
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T-Lead	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Lithium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Magnesium	ICP, APHA 3120B Exova Subcontract	EXL	19/04/2010
T-Manganese	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Mercury	CVAAS Exova Subcontract	EXL	19/04/2010
T-Nickel	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Phosphorus	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Potassium	ICP, APHA 3120B Exova Subcontract	EXL	19/04/2010
T-Selenium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Silver	ICP-MS, USEPA 200.8 Exovat Subcontract	EXL	19/04/2010
T-Sodium	ICP, APHA 3120B Exova Subcontract	EXL	19/04/2010
T-Uranium	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
T-Zinc	ICP-MS, USEPA 200.8 Exova Subcontract	EXL	19/04/2010
Total Coliforms (DES)	Colilert 18	NIsL	14/04/2010
Total Dissolved Solids	gravimetric Norwest Subcontract	EXL	19/04/2010
Turbidity	Nephalometric	NIsL	15/04/2010

Approved By:

Catherine Black, Owner/Operator

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

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