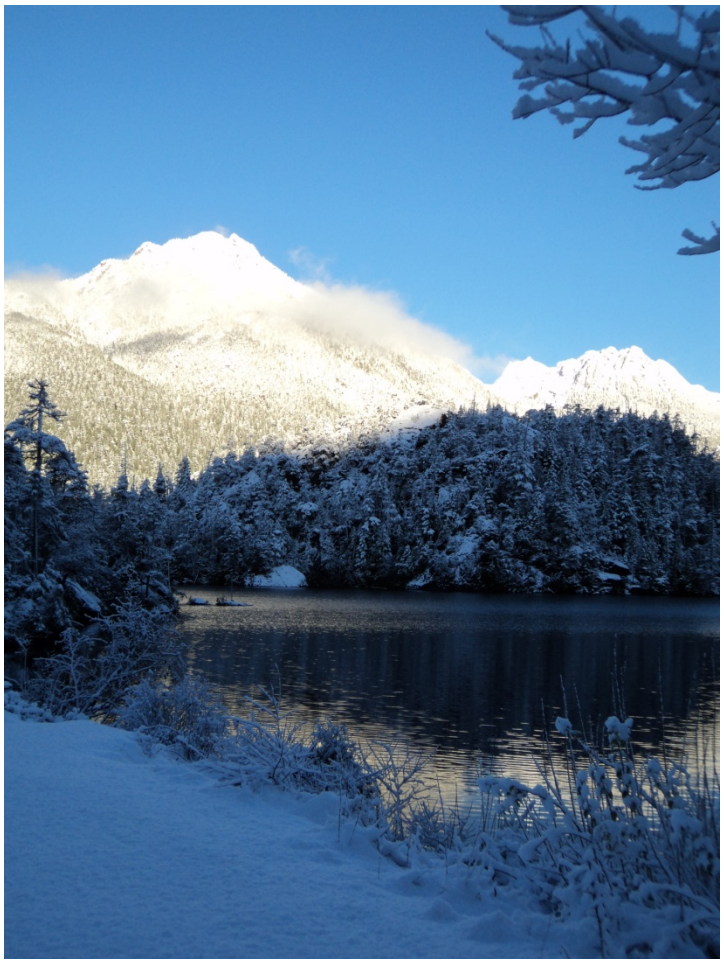
ALBERNI-CLAYOQUOT
REGIONAL DISTRICT

2012 Annual Water System Report



Introduction

This annual water systems report will provide an overview of the ACRD water services. It is our responsibility to the community and to the provincial health authority to share this information. This report is for the publics review.

Within the Province of British Columbia the Drinking Water Protection Act and the Drinking Water Regulation prescribes the performance of the water suppliers. Examples of some of these are that the supplier must at all times provide potable water and monitor its sources. The Drinking Water Protection Act Section 15 and the Drinking Water Protection Regulation Section 11 outline the basic requirements that pertain to this annual report.

The Province of British Columbia is responsible for public health and the governance is distributed to local health authorities. The ACRD falls under the Vancouver Island Health Authority (VIHA), whose mission is to minimize health risks to the public. VIHA's Drinking Water program assists with safe drinking water to our communities. This is looked after by VIHA's Public Health Engineer and the Environmental Health Officer who evaluates sources, grant permits and perform inspections.

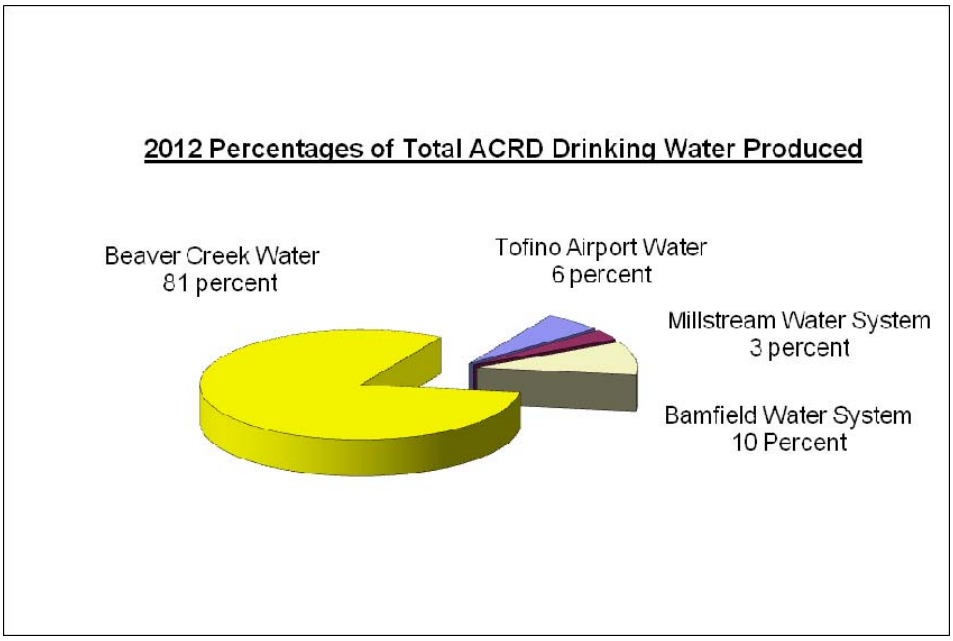
Management

The Environmental Services Department at the ACRD is responsible for the overall management of the water systems including administrative and financial services. The water systems are maintained by EOCP certified ACRD employees.

Operations

The ACRD regularly performs tests to ensure that the water is meeting all standards. A complete water potability test of the raw water is typically performed every two years. The water system operators regularly check the disinfection and safety of the drinking water and in the systems with chlorine disinfection, the Free Chlorine residual is measured daily. The systems with Ultraviolet Disinfection (UV) are also checked to make sure the light intensity is adequately disinfecting the water.

Monthly water samples are submitted to Vancouver Island Health Authority (VIHA) for monitoring for the purpose of the Drinking Water Protection Act. The water samples are analyzed by the British Columbia Center for Disease Control (BC CDC) for bacteria and specifically Total Coliforms and E. Coli. VIHA's Environmental Health Officer annually checks all permitted drinking water systems. Water mains are regularly flushed to ensure water quality and hydrant maintenance is performed annually.



Total drinking water produced by the four largest systems

Water Systems Review

The Alberni-Clayoquot Regional District owns and operates eight individually distinct water systems. In order of the highest annual volumes of water produced the water systems names are:

1. **Beaver Creek Water System**

This is a community of 2,820 which borders the City of Port Alberni on the south, the Beaufort Electoral Area on the north and east and the Sproat Lake Electoral Area on the west. The Stamp and Somass Rivers form the western boundary of Beaver Creek. The Beaver Creek Improvement District converted into a local service area of the Alberni Clayoquot Regional District on June 1 2012. Beaver Creek Water System has an Advisory Committee made up of the Beaver Creek Director and volunteer members of the community. This committee provides guidance and advice to staff with the water system.

System review:

- Water Source: Stamp River
- Treatment: Fine screen intake
- Disinfection: Chlorine
- Reservoir(s):
  1. Concrete reservoir on Kitsuksis Street, Volume of 1,135 m3
  2. Bolted Steel Reservoir on Beaver Creek Road, Volume of 273 m3
  3. Glass Fused Reservoir on Kitsuksis Street, Volume of 1,135 m3
- Service connections: 987

- Length of mains: The distribution system consists of a mixture of 100,150,200 and 300 mm diameter piping with a total length of 43,600 meters
- Water main material: The majority of the distribution system is Asbestos Cement (AC) (67.5%) installed in the 1960's. The remainder is made up of polyvinyl chloride (PVC)
- Average Daily Flow: 1166 cubic meters

The majority of the Beaver Creek Water System was constructed in the 1960's. The water mains were originally constructed with asbestos cement pipe and more recent improvements were with polyvinyl. The source water is from the Stamp River accessed through an infiltration gallery. The water is initially chlorinated at the pump house and secondarily rechlorinated at the reservoirs.

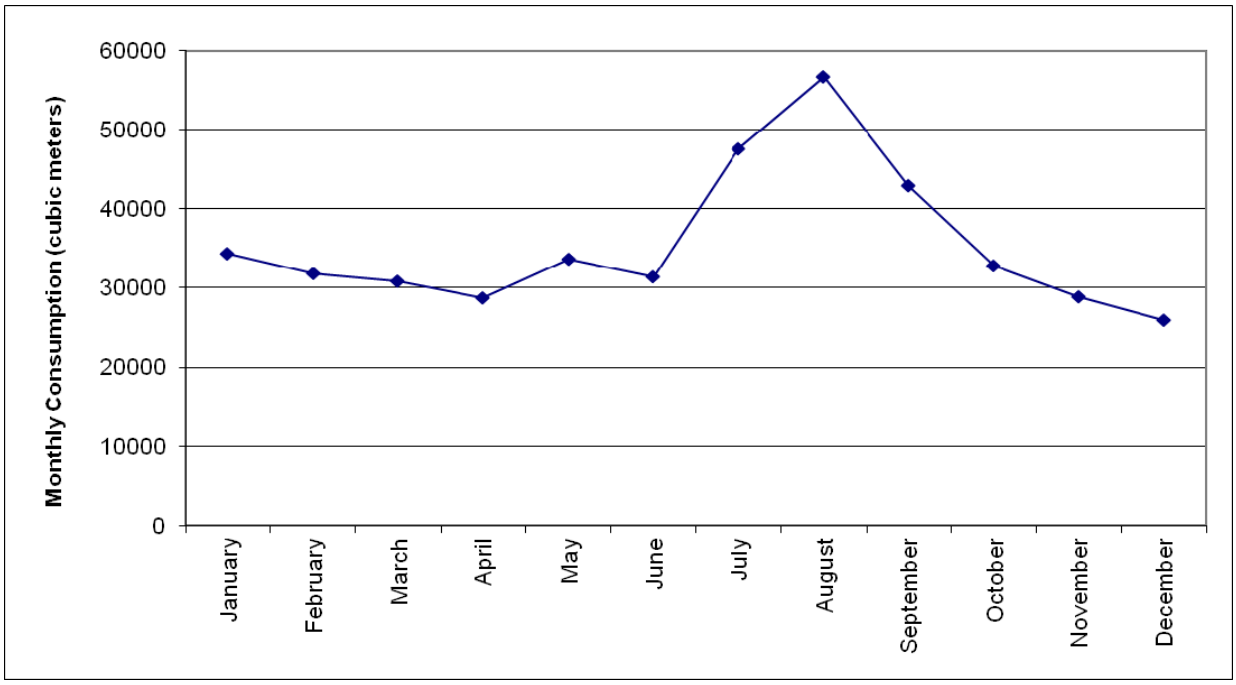
The original reservoir on Kitsuksis Street has been experiencing leaks for several years which have necessitated replacement. The new Kitsuksis reservoir is underway and will be placed into service in early 2013.

The new reservoir was financed through Gas Tax Funding as converting from an improvement district to a regional district so it could access this grant. Improvement districts are not eligible for infrastructure grants, whereas regional districts are. Improvement districts also cannot borrow for capital works at interest rates that regional districts can. The Beaver Creek Improvement District office has been permanently closed and the administrative staff is now working out of the Regional District office. All current assets and liabilities of the water system remain within the Beaver Creek Water Service Area, which has the current boundaries of the Improvement District.

The Beaver Creek Water System is under notification from the Vancouver Island Health Authority that it must develop a plan to meet the provincial "4-3-2-1" water quality guidelines. The Regional District is examining funding opportunities to build a pump station to enable an interconnection with the City of Port Alberni's water system. This would allow the City of Port Alberni's water to be utilized on a temporary basis to alleviate boil water occurrences.

In 2012 a used fire truck was purchased to use as an interim connection to the City of Port Alberni's water system to prevent boil water advisories. The use of the truck was approved by consulting engineers and the Vancouver Island Health Authority. This technique prevented three boil water advisories and weeks of operational time required to flush the distribution system.

A long term solution to water supply and treatment will be made in consultation with Beaver Creek residents. There will be cost increases required by Beaver Creek to upgrade the water distribution system and meet the treatment requirements of the Vancouver Island Health Authority.



Beaver Creek Water Systems 2012 Monthly Consumption

2. Bamfield Community Water System

Bamfield is nestled quietly in a protected inlet on the south shore of Barkley Sound located on the outer west coast of Vancouver Island. Europeans founded a small outpost for fur trading and a fishing community sometime in the late 1800s. Bamfield is divided into two sections, separated by about 180 meters of the Bamfield Inlet. The west side of Bamfield is linked by a waterfront boardwalk that connects all the homes and docks on the harbour side. The east side of Bamfield contains most of the businesses, including a pub, a market and café.

In Bamfield there is a committee that works with the ACRD in determining the direction and operation of the water system. The committee is made of the Electoral Area "A" Director and volunteer members of the community. A contracted water operator runs the day to day operations of the Bamfield Water System. The water operator is certified through the Environmental Operator Certificate Program (EOCP) to operate small water systems.

System review:

- Water Source: Sugsaw Lake
- Treatment: Fine screen intake
- Disinfection: Chlorine
- Reservoir(s): Two Bolted Steel reservoirs, 214 m3 & 441 m3
- Service connections: 207
- Length of mains: App. 4550 meters of 150 mm

App. 1300 meters of 100 mm
App. 5175 meters of 50 mm
App. 325 meters of 25 mm

- Water main material: Polyvinyl Chloride and Polyethylene
- Average Daily Flow: 142 cu. meters

The Bamfield Water System was constructed in 1979 and 1980. Before then, water was collected from individual wells, local springs and rain water collection systems. The Bamfield Water System is complex is partially due to the various subsurface water lines crossing the inlets in various locations. These marine water lines are challenging to repair, being under water and often under layers of sediment.

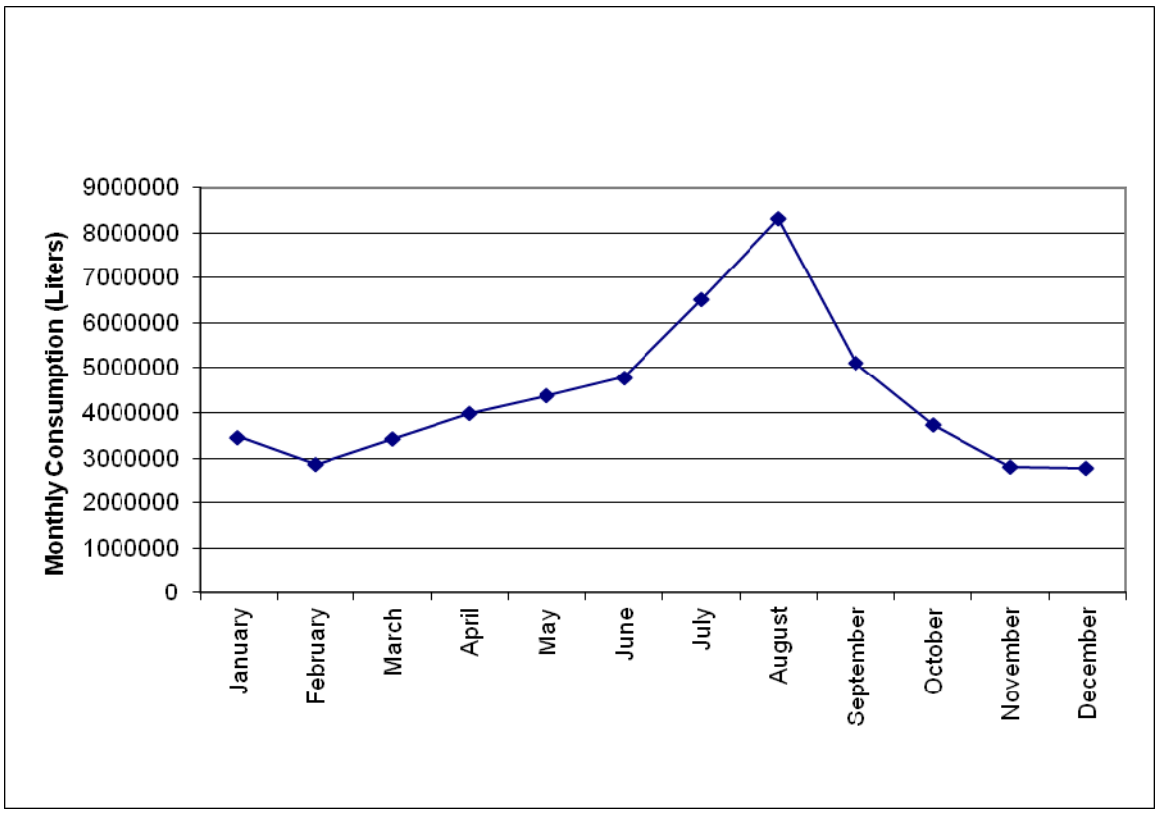
The Bamfield water system has experienced distribution leaks caused by dissimilar metals and exposed pipes, which are subject to freezing. During a power outage there is a back up generator which automatically starts providing no disruption to the water supply.

In 2012 reservoir #1 was drained and thoroughly cleaned with the assistance of the City of Port Alberni's works crew. Reservoir #2 was drained and rinsed out from the top. A new manhole was installed at the chlorine building to facilitate the maintenance of the chlorine injectors. At the end of May a Boil Water Notice was initiated as the chlorine pumps did not turn on due to an electrical problem. As result of this an automatic low chlorine alarm and pump shut off was installed. The walkway on the floating water intake structure at Sugsaw Lake was rebuilt to ensure safety.

The engineering company of Koers & Associates has been awarded a contract to review the Bamfield Water System. Koers will make recommendations on the maintenance and operations of the system, and outline improvements in their report due in 2013.

Planned improvements are the installation of a rechlorination building at the reservoirs to provide adequate disinfection. A section of water main behind the Coast Guard is planned on being replaced due to improper pipe material and leaks. Other areas of the water system will be reviewed for replacement or upgrades.

Regular sampling for Trihalomethanes (THM) will occur in 2013 as there is a concern due to the organics in the water. Trihalomethanes are formed as a by-product predominantly when chlorine is used to disinfect water for drinking. Sample results from 2012 showed higher values than expected. The water system will also have quarterly frequent flushing to improve the quality.



Bamfield Water Systems 2012 Monthly Consumption

3. Long Beach Airport Water System

The Long Beach Airport Water System is located within the Long Beach Airport across from Long Beach of the Pacific Rim National Park. The airport is located between the villages of Tofino and Ucluelet, on the west coast of Vancouver Island. The Long Beach Airport Water System was originally constructed during World War II to service the military airport and related services. Currently, the supply and treatment system is comprised of a deep well water source, water softener, chlorination, pump house, reservoir and a distribution system. The water is supplied to the Communities of Ty-Histanis and Esowista (Tla-O-Qui-Aht First Nation), airport service buildings and the Long Beach Golf Course. A contracted water operator runs the day to day operations of the Long Beach Airport Water System. The water operator is certified through the Environmental Operator Certificate Program (EOCP) to operate small water systems.

System overview:

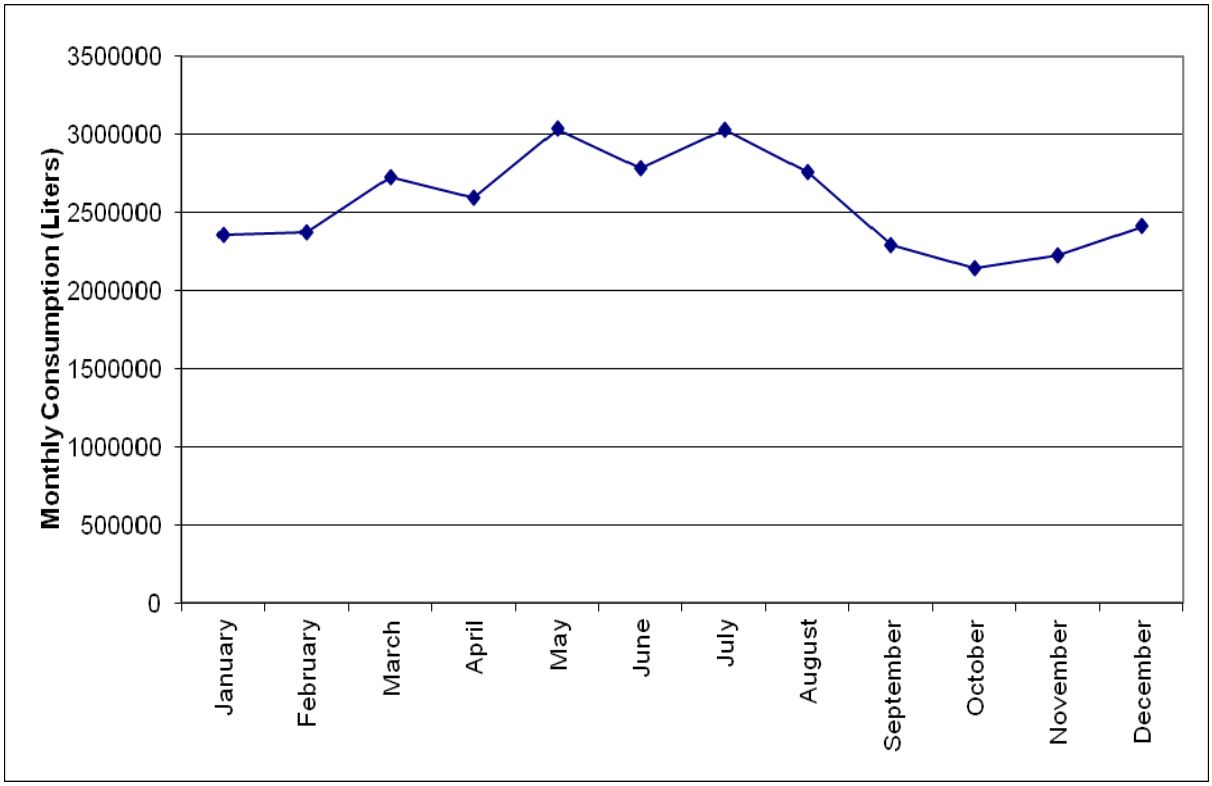
- Water Source: Deep drilled well
- Treatment: Ion Exchange (Sodium) water softener
- Disinfection: Chlorine
- Reservoir: One concrete reservoir, 1364 m3

- Service connections: 9 connections
- Length of mains: 2730 m of C.I. & 188 m of PVC
- Water main material: Cast Iron (CI), Polyvinyl Chloride (PVC)
- Average Daily Flow: 78.8 cu. meters

In 2012 an additional water source was further investigated to assist with future demand. This was performed using exploratory drilling techniques to determine aquifer capacity. The potential for further aquifer reserves is still being determined.

The reservoir is monitored to determine when cleaning is required. Cleaning will remove any precipitate (insoluble solid) that is caused by the oxidation of the chlorine reacting with soluble metals. A new water treatment method will be analyzed to facilitate future growth and environmental concerns.

The exterior of the reservoir was cleaned and brush along the perimeter was removed. Also, a concrete man way into the reservoir required patching. A new water meter was installed for the Long Beach Golf Course to ensure accurate flow measurement and to assist in leak detection. New water meters were installed for airside lease lots to measure the water use and facilitate leak detection.



Long Beach Airport Water Systems 2012 Monthly Consumption

4. Millstream Community Water System

Millstream is a small residential community located approximately 3.5 km north of the District of Ucluelet. The area was originally developed by a logging contractor to provide accommodation for employees and their families. The existing water system was constructed between July and October in 1969. The type of pipe used was asbestos cement (A.C.), which was the current technology at the time. The original wood reservoir was replaced with a metal reservoir in the early 1990's. A contracted water operator runs the day to day operations of the Millstream Community Water System. The water operator is certified through the Environmental Operator Certificate Program (EOCP) to operate small water systems.

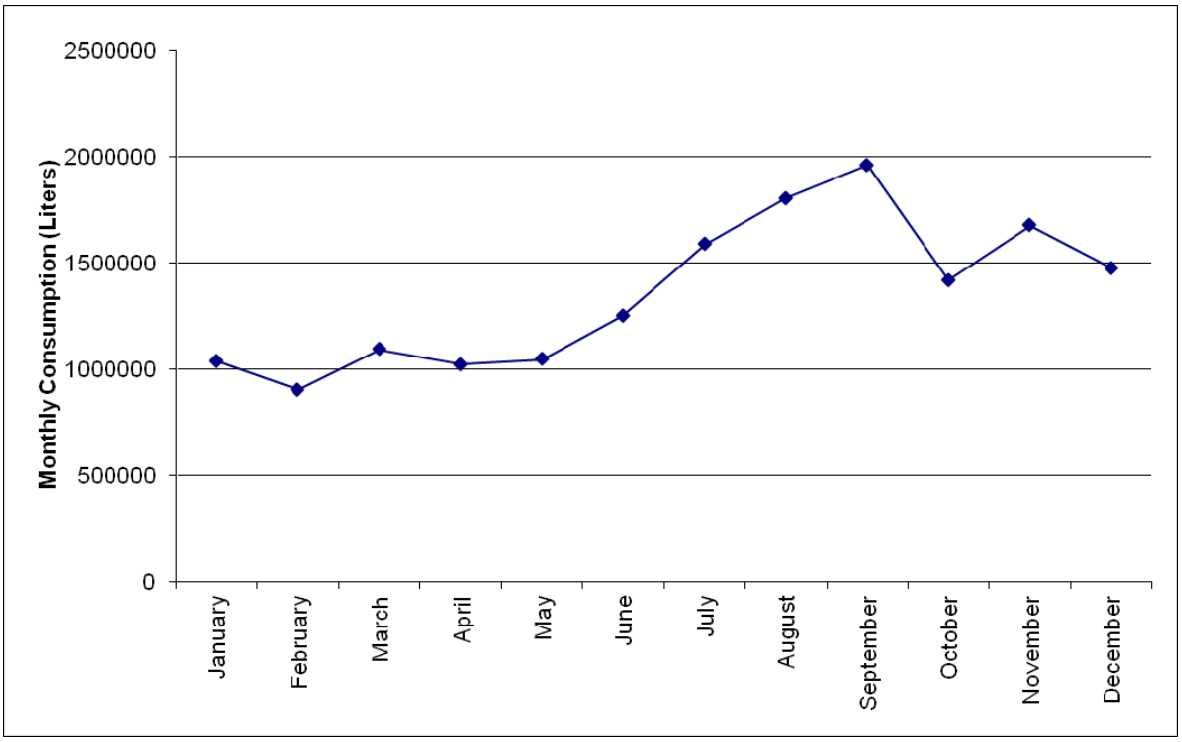
System overview:

- Water Source: Two shallow dug wells, 4.1 and 3.6 meters
- Treatment: none
- Disinfection: Chlorine
- Reservoir: Bolted steel, 656 m3
- Service connections: 50
- Length of mains: 980 m of 100mm
- Water main material: Asbestos Cement (AC)
- Average Daily Flow: 43 cu. meters

The water mains are mostly asbestos cement and are subject to radial fractures and softening over time. Two substantial leaks on Lee Street and Albion Crescent were discovered and then immediately repaired.

The reservoir had a sample port replaced, as corrosion had created a small leak. The operator was creative in replacing the fitting while the reservoir was full.

The reservoir is scheduled to be drawn down for a thorough inspection and cleaning in 2013. Sections of the AC water mains will be reviewed for systematic replacement. A potential connection to the District of Ucluelet's water system will be reviewed for future emergency use.



Millstream Water Systems 2012 Monthly Consumption

5. Cougar Smith Park Small Water System

Cougar Smith Park is in the Sproat Lake area within the Alberni Valley. The park is located on Faber Road situated approximately 13 km northwest of Port Alberni. It has a bike skills park, baseball diamond, tennis courts and playgrounds.

System overview:

- Water Source: Sproat Lake
- Treatment: micro filtration
- Disinfection: Ultraviolet (UV)
- Reservoir capacity and type: No reservoir
- Service connections: Two connections, one for the caretaker residence and one for the public building
- Length of mains: 144 m of 31.75 mm
- Water main material: Polyethylene (PE)
- Average Daily Flow: meter installed in 2012

The water system infrastructure is located within a building within the park. Within the building are a pressure tank, an ultraviolet light disinfection system and a five micron particulate filter. It then supplies two public washrooms, an irrigation system, a drinking fountain and the caretaker's residence.

In 2012 the source water was switched to its original supply at Sproat Lake from the drilled well. This was done in order to achieve the best water quality and supply as there was a growing need for additional water for irrigation and further park improvements.

Receiving an VIHA Operating Permit will be the objective this year. In order to obtain the Operating Permit a number of requirements were required including a water licence from the Province to remove water from Sproat Lake and water testing results.

6. Alberni Valley Regional Airport Small Water System

The Alberni Valley Regional Airport is located approximately 7 kilometers west of Port Alberni. This small water system at the Alberni Valley Regional Airport was constructed in 1993 to service the site caretaker's residence and the Airport Terminal Building. The Terminal Building has washroom facilities available to the personnel working in three offices and to the public. There is an exterior hose bib that is used for watering plants and washing vehicles.

The microbiological activity in the well water appears to be active during times of high water level. This has been documented in the past year and in previous years linking it to higher precipitation in the winter. With VIHA's recommendation and approval the system was equipped with micro filtration and UV disinfection.

System overview:

- Water Source: Shallow dug well to 5.5 m deep
- Treatment: micro filtration
- Disinfection: Ultraviolet (UV)
- Reservoir capacity and type: No reservoir
- Service connections: Three connections, two caretaker connections and airport terminal building
- Length of mains: approximately 350 meters of 38 mm.
- Water main material: Polyethylene (PE)
- Average Daily Flow: meter installed in 2012

7. Alberni Valley Landfill

The Alberni Valley Landfill is located north west of Port Alberni off of McCoy Lake road.

System overview:

- Water Source: Sproat Lake through Catalyst Paper water main.
- Treatment: none
- Disinfection: none (non potable system)
- Reservoir capacity and type: 970 cubic meters Bolted Steel

- Service connections: Three connections, scale building, work shop, caretakers building
- Length of mains: 1250 meters
- Water main material: Polyvinyl Chloride (PVC)
- Average Daily Flow: Not metered

The Alberni Valley Landfill water system is non potable water for operational use and fire fighting purposes only and is not meant for public consumption.

8. West Coast Landfill

The West Coast Landfill is located adjacent to Pacific Rim National Park Reserve, between the Districts of Tofino and Ucluelet.

System overview:

- Water Source: Shallow dug well
- Treatment: none
- Disinfection: none (non potable system)
- Reservoir capacity and type: no reservoir
- Service connections: one connection to the scale building
- Length of mains: 20 meters
- Water main material: Polyethylene (PE)
- Average Daily Flow: not metered

The West Coast Landfill water system is for non potable water for operational use only and is not meant for public consumption.

Alberni Clayoquot Regional District Water Systems

Appendix A

Certificate of Analysis

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: Regional District of Alberni & Clayoquot
John Thomas
3008 5th Ave.
Port Alberni, BC V9Y 2E3
V9Y 2E3

Lab Number: 99683
Date Reported: 10 Dec 12
Date Completed: 10 Dec 12
Date Received: 7 Dec 12 10:53

Sampled By:
Sampling Date: 6 Dec 12 0:00

Test	Result	Units	Detection Limit
99683-01 Stamp Above Truman	**Beaver Creek WS**		
Fecal Coliforms (MF)	1	CFU/100ml	1 CFU/100ml
Total Coliforms (MF)	30	CFU/100mL	1 CFU/100mL
E. coli (MF)	5	CFU/100mL	1 CFU/100mL
99683-02 Stamp Below Truman	**Beaver Creek WS**		
Fecal Coliforms (MF)	28	CFU/100ml	1 CFU/100ml
Total Coliforms (MF)	200	CFU/100mL	1 CFU/100mL
E. coli (MF)	20	CFU/100mL	1 CFU/100mL
99683-03 Above Truman Paddock	**Beaver Creek WS**		
Fecal Coliforms (MF)	25	CFU/100ml	1 CFU/100ml
Total Coliforms (MF)	1000	CFU/100mL	1 CFU/100mL
E. coli (MF)	10	CFU/100mL	1 CFU/100mL
99683-04 Below Truman Paddock	**Beaver Creek WS**		
Fecal Coliforms (MF)	33	CFU/100ml	1 CFU/100ml
Total Coliforms (MF)	1300	CFU/100mL	1 CFU/100mL
E. coli (MF)	24	CFU/100mL	1 CFU/100mL

North Island Laboratories
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Certificate of Analysis

Report To: Regional District of Alberni & Clayoquot
John Thomas
3008 5th Ave.
Port Alberni, BC V9Y 2E3
V9Y 2E3

Lab Number: 99388
Date Reported: 30 Nov 12
Date Completed: 30 Nov 12
Date Received: 22 Nov 12 11:35

Sampled By:
Sampling Date: 21 Nov 12 0:00

Test	Result	Units	Detection Limit
99388-01 Sugsaw Lake raw	**Bamfield WS**		
Alkalinity	<20	mg/L (CaCO3)	20 mg/L (CaCO3)
Total Ammonia (N)	<0.05	mg/L	0.05 mg/L
Chloride	3.7	mg/L	0.1 mg/L
Fluoride	<0.05	mg/L	0.05 mg/L
Nitrate (N)	0.06	mg/L	0.05 mg/L
Nitrite (N)	<0.05	mg/L	0.05 mg/L
Sulphate	1.6	mg/L	0.5 mg/L
Colour - Apparent	48	Colour Units	1 Colour Units
pH	6.6	pH Units	pH Units
Conductivity	29	uS/cm	1 uS/cm
Iron Bacteria	None Detected	cfu/mL	cfu/mL
Sulphur Bacteria	None Detected	cfu/mL	cfu/mL
T-Mercury	<0.0001	mg/L	0.0001 mg/L
Sulphide	<0.005	mg/L	0.005 mg/L
Total Coliforms (MF)	270	CFU/100mL	1 CFU/100mL
E. coli (MF)	3	CFU/100mL	1 CFU/100mL
Non-Coliform Background	290	CFU/100mL	1 CFU/100mL
Total Dissolved Solids	32	mg/L dried at 180 °C	7 mg/L dried at 180
Total Organic Carbon	5.7	mg/L	0.5 mg/L
Total Organic Nitrogen	0.18	mg/L	0.08 mg/L
Total Plate Count	30	CFU/ml	3 CFU/ml
T-Aluminium	0.166	mg/L	0.005 mg/L
T-Antimony	<0.0001	mg/L	0.0001 mg/L
T-Arsenic	<0.00005	mg/L	0.00005 mg/L
T-Barium	0.00514	mg/L	0.00005 mg/L
T-Beryllium	<0.00005	mg/L	0.00005 mg/L
T-Boron	0.02	mg/L	0.002 mg/L

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99388-01	Sugsaw Lake raw	Bamfield WS		
T-Bismuth		<0.0001	mg/L	0.0001 mg/L
T-Cadmium		<0.00001	mg/L	0.00001 mg/L
T-Calcium		2.26	mg/L	0.05 mg/L
T-Chromium		<0.0005	mg/L	0.0005 mg/L
T-Cobalt		<0.0001	mg/L	0.0001 mg/L
T-Copper		0.0005	mg/L	0.0001 mg/L
T-Iron		0.097	mg/L	0.002 mg/L
T-Lead		<0.0001	mg/L	0.0001 mg/L
T-Lithium		<0.0005	mg/L	0.0005 mg/L
T-Magnesium		0.5	mg/L	0.04 mg/L
T-Manganese		0.0091	mg/L	0.001 mg/L
T-Molybdenum		0.00008	mg/L	0.00005 mg/L
T-Nickel		<0.0002	mg/L	0.0002 mg/L
T-Potassium		0.1	mg/L	0.1 mg/L
T-Selenium		<0.0001	mg/L	0.0001 mg/L
T-Silicon		1.5	mg/L	0.02 mg/L
T-Silver		0.00004	mg/L	0.0005 mg/L
T-Sodium		2.7	mg/L	0.1 mg/L
T-Strontium		0.0113	mg/L	0.0001 mg/L
T-Thallium		<0.00001	mg/L	0.00001 mg/L
T-Tin		<0.0001	mg/L	0.0001 mg/L
T-Titanium		0.0016	mg/L	0.0005 mg/L
T-Uranium		<0.00001	mg/L	0.00001 mg/L
T-Vanadium		0.0003	mg/L	0.0001 mg/L
T-Zinc		0.0017	mg/L	0.0005 mg/L
Hardness (CaCO3)		2.1	mg/L	1 mg/L
Turbidity		0.6	NTU's	0.5 NTU's

North Island Laboratories
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Certificate of Analysis

Report To: Regional District of Alberni & Clayoquot
John Thomas
3008 5th Ave.
Port Alberni, BC V9Y 2E3
V9Y 2E3

Lab Number: 99389
Date Reported: 30 Nov 12
Date Completed: 30 Nov 12
Date Received: 22 Nov 12 11:47

Sampled By:
Sampling Date: 21 Nov 12 0:00

Test	Result	Units	Detection Limit
99389-01 BWS Reservoir	**Bamfield WS**		
Alkalinity	<20	mg/L (CaCO3)	20 mg/L (CaCO3)
Total Ammonia (N)	<0.05	mg/L	0.05 mg/L
Chloride	11.1	mg/L	0.1 mg/L
Fluoride	<0.05	mg/L	0.05 mg/L
Nitrate (N)	<0.05	mg/L	0.05 mg/L
Nitrite (N)	<0.05	mg/L	0.05 mg/L
Sulphate	1.7	mg/L	0.5 mg/L
Colour - Apparent	14	Colour Units	1 Colour Units
pH	6.7	pH Units	pH Units
Conductivity	61	uS/cm	1 uS/cm
Iron Bacteria	None Detected	cfu/mL	cfu/mL
Sulphur Bacteria	None Detected	cfu/mL	cfu/mL
T-Mercury	<0.0001	mg/L	0.0001 mg/L
Sulphide	<0.005	mg/L	0.005 mg/L
Total Coliforms (MF)	<1	CFU/100mL	1 CFU/100mL
E. coli (MF)	<1	CFU/100mL	1 CFU/100mL
Non-Coliform Background	<1	CFU/100mL	1 CFU/100mL
Total Dissolved Solids	42	mg/L dried at 180 °C	7 mg/L dried at 180
Total Organic Carbon	5	mg/L	0.5 mg/L
Total Organic Nitrogen	0.12	mg/L	0.08 mg/L
Total Plate Count	<3	CFU/ml	3 CFU/ml
T-Aluminium	0.147	mg/L	0.005 mg/L
T-Antimony	<0.0001	mg/L	0.0001 mg/L
T-Arsenic	<0.00005	mg/L	0.00005 mg/L
T-Barium	0.00624	mg/L	0.00005 mg/L
T-Beryllium	<0.00005	mg/L	0.00005 mg/L
T-Boron	0.022	mg/L	0.002 mg/L

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

99389-01	BWS Reservoir	Bamfield WS		
T-Bismuth		<0.0001	mg/L	0.0001 mg/L
T-Cadmium		<0.00001	mg/L	0.00001 mg/L
T-Calcium		2.89	mg/L	0.05 mg/L
T-Chromium		<0.0005	mg/L	0.0005 mg/L
T-Cobalt		<0.0001	mg/L	0.0001 mg/L
T-Copper		0.003	mg/L	0.0001 mg/L
T-Iron		0.099	mg/L	0.002 mg/L
T-Lead		0.0004	mg/L	0.0001 mg/L
T-Lithium		<0.0005	mg/L	0.0005 mg/L
T-Magnesium		0.52	mg/L	0.04 mg/L
T-Manganese		0.004	mg/L	0.001 mg/L
T-Molybdenum		0.00009	mg/L	0.00005 mg/L
T-Nickel		<0.0002	mg/L	0.0002 mg/L
T-Potassium		0.1	mg/L	0.1 mg/L
T-Selenium		<0.0001	mg/L	0.0001 mg/L
T-Silicon		1.56	mg/L	0.02 mg/L
T-Silver		0.00003	mg/L	0.0005 mg/L
T-Sodium		8.8	mg/L	0.1 mg/L
T-Strontium		0.014	mg/L	0.0001 mg/L
T-Thallium		<0.00001	mg/L	0.00001 mg/L
T-Tin		<0.0001	mg/L	0.0001 mg/L
T-Titanium		0.0008	mg/L	0.0005 mg/L
T-Uranium		<0.00001	mg/L	0.00001 mg/L
T-Vanadium		0.0002	mg/L	0.0001 mg/L
T-Zinc		0.0168	mg/L	0.0005 mg/L
Hardness (CaCO3)		9.4	mg/L	1 mg/L
Bromodichloromethane		0.005	mg/L	0.001 mg/L
Bromoform		<0.001	mg/L	0.001 mg/L
Chloroform		0.252	mg/L	0.001 mg/L
Dibromochloromethane		<0.001	mg/L	0.001 mg/L
Total Trihalomethanes		0.257	mg/L	0.001 mg/L
Turbidity		0.6	NTU's	0.5 NTU's

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:	Regional District of Alberni & Clayoquot John Thomas 3008 5th Ave. Port Alberni, BC V9Y 2E3 V9Y 2E3	Lab Number: Date Reported: Date Completed: Date Received:	99390 30 Nov 12 22 Nov 12 11:52

Sampled By:
Sampling Date: 21 Nov 12 0:00

Test	Result	Units	Detection Limit
99390-01 Bamfield Marine Station			
Bromodichloromethane	0.005	mg/L	0.001 mg/L
Bromoform	<0.001	mg/L	0.001 mg/L
Chloroform	0.254	mg/L	0.001 mg/L
Dibromochloromethane	<0.001	mg/L	0.001 mg/L
Total Trihalomethanes	0.259	mg/L	0.001 mg/L

99390-01

Test	Method	Analyst	Date
Bromodichloromethane	Exova Subcontract-EPA 8260B/5035 - modified	EXL	11/26/2012
Bromoform	Exova Subcontract-EPA 8260B/5035 - modified	EXL	11/26/2012
Chloroform	Exova Subcontract-EPA 8260B/5035 - modified	EXL	11/26/2012
Dibromochloromethane	Exova Subcontract-EPA 8260B/5035 - modified	EXL	11/26/2012
Total Trihalomethanes	Exova Subcontract-EPA 8260B/5035 - modified	EXL	11/26/2012

Approved By: Catherine Black

Catherine Black, Owner/Operator

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: Regional District of Alberni & Clayoquot
John Thomas
3008 5th Ave.
Port Alberni, BC V9Y 2E3
V9Y 2E3

Lab Number: 91833
Date Reported: 6 Dec 11
Date Completed: 6 Dec 11
Date Received: 23 Nov 11 10:58

91833-01 Tofino Airport Raw
Sampled By:
Sampling Date: 22 Nov 11 0:00

Test	Result	Units	Drinking Water Guideline
Total Coliforms (DES)	>200.5	MPN/100mL	<1
E. coli (DES)	<1.0	MPN/100mL	<1
pH	7.0	pH Units	6.5-8.5
Alkalinity	<20	mg/L (CaCO3)	
Turbidity	6.3	NTU's	5 AO
Total Dissolved Solids (conductivity ca	44	mg/L	500 AO
Fluoride	<0.05	mg/L	1.5 MAC
Chloride	10.1	mg/L	250 AO
Nitrate (N)	<0.05	mg/L	10 MAC
Nitrite (N)	<0.05	mg/L	1 MAC
Sulphate	1.9	mg/L	500 AO
T-Aluminium	0.028	mg/L	0.1 Operational Std.
T-Antimony	<0.0002	mg/L	0.006 MAC
T-Arsenic	0.0003	mg/L	0.010 MAC
T-Barium	0.005	mg/L	1.0 MAC
T-Beryllium	<0.00004	mg/L	
T-Bismuth	<0.001	mg/L	
T-Boron	0.007	mg/L	5 IMAC
T-Cadmium	<0.00001	mg/L	0.005 MAC
T-Calcium	6.06	mg/L	
T-Chromium	<0.0004	mg/L	0.05 MAC
T-Cobalt	0.00052	mg/L	
T-Copper	0.002	mg/L	1.0 AO
T-Iron	1.29	mg/L	0.3 AO
T-Lead	0.0006	mg/L	0.010 MAC
T-Lithium	<0.001	mg/L	

AO = Aesthetic Objective; MAC = Max. Allowable Concentration; IMAC = Interim MAC
> = Greater than; < = Less than

Canadian Drinking Water Guidelines as listed on Dec. 5th, 2005 and are subject to

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

91833-01 Tofino Airport Raw
Sampled By:
Sampling Date: 22 Nov 11 0:00

Test	Result	Units	Drinking Water Guideline
T-Magnesium	1	mg/L	
T-Manganese	0.118	mg/L	0.05 AO
T-Molybdenum	0.0004	mg/L	
T-Nickel	0.003	mg/L	
T-Phosphorus	<0.01	mg/L	
T-Potassium	0.6	mg/L	
T-Selenium	<0.0006	mg/L	0.01 MAC
T-Silicon	0.17	mg/L	
T-Silver	<0.00001	mg/L	
T-Sodium	4.62	mg/L	200 AO
T-Strontium	0.024	mg/L	
T-Thallium	<0.00001	mg/L	
T-Tin	<0.0001	mg/L	
T-Titanium	<0.001	mg/L	
T-Uranium	<0.0004	mg/L	0.02 MAC
T-Vanadium	<0.0001	mg/L	
T-Zinc	0.035	mg/L	5 AO
Hardness (CaCO3)	19	mg/L	
Colour - Apparent	120	Colour units	15 AO
Tannins & Lignins	0.3	mg/L	0.4 AO
UV Transmittance	70.5	%/cm	

AO = Aesthetic Objective; MAC = Max. Allowable Concentration; IMAC = Interim MAC
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Canadian Drinking Water Guidelines as listed on Dec. 5th, 2005 and are subject to

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

Certificate of Analysis

Report To: Regional District of Alberni & Clayoquot
John Thomas
3008 5th Ave.
Port Alberni, BC V9Y 2E3
V9Y 2E3

Lab Number: 91832
Date Reported: 6 Dec 11
Date Completed: 6 Dec 11
Date Received: 23 Nov 11 10:53

91832-01 Millstream Raw
Sampled By:
Sampling Date: 22 Nov 11 0:00

Test	Result	Units	Drinking Water Guideline
Total Coliforms (DES)	2.0	MPN/100mL	<1
E. coli (DES)	<1.0	MPN/100mL	<1
pH	7.3	pH Units	6.5-8.5
Alkalinity	96	mg/L (CaCO3)	
Turbidity	<0.5	NTU's	5 AO
Total Dissolved Solids (conductivity ca	170	mg/L	500 AO
Fluoride	<0.05	mg/L	1.5 MAC
Chloride	13.1	mg/L	250 AO
Nitrate (N)	0.93	mg/L	10 MAC
Nitrite (N)	<0.05	mg/L	1 MAC
Sulphate	5.2	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	0.0003	mg/L	0.010 MAC
T-Barium	0.002	mg/L	1.0 MAC
T-Beryllium	<0.00004	mg/L	
T-Bismuth	<0.001	mg/L	
T-Boron	0.032	mg/L	5 IMAC
T-Cadmium	<0.00001	mg/L	0.005 MAC
T-Calcium	32.2	mg/L	
T-Chromium	<0.0004	mg/L	0.05 MAC
T-Cobalt	0.00003	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	

AO = Aesthetic Objective; MAC = Max. Allowable Concentration; IMAC = Interim MAC
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Canadian Drinking Water Guidelines as listed on Dec. 5th, 2005 and are subject to

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

91832-01 Millstream Raw
Sampled By:
Sampling Date: 22 Nov 11 0:00

Test	Result	Units	Drinking Water Guideline
T-Magnesium	6.18	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	<0.01	mg/L	
T-Potassium	0.8	mg/L	
T-Selenium	<0.0006	mg/L	0.01 MAC
T-Silicon	<0.05	mg/L	
T-Silver	<0.00001	mg/L	
T-Sodium	11.4	mg/L	200 AO
T-Strontium	0.087	mg/L	
T-Thallium	<0.00001	mg/L	
T-Tin	<0.0001	mg/L	
T-Titanium	<0.001	mg/L	
T-Uranium	<0.0004	mg/L	0.02 MAC
T-Vanadium	0.0009	mg/L	
T-Zinc	0.002	mg/L	5 AO
Hardness (CaCO3)	110	mg/L	
Colour - Apparent	<5	Colour units	15 AO
Tannins & Lignins	<0.1	mg/L	0.4 AO
UV Transmittance	97.8	%/cm	

AO = Aesthetic Objective; MAC = Max. Allowable Concentration; IMAC = Interim MAC
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Canadian Drinking Water Guidelines as listed on Dec. 5th, 2005 and are subject to

North Island Laboratories
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Certificate of Analysis

Report To: Regional District of Alberni & Clayoquot
John Thomas
3008 5th Ave.
Port Alberni, BC V9Y 2E3
V9Y 2E3

Lab Number: 97905
Date Reported: 24 Sep 12
Date Completed: 24 Sep 12
Date Received: 11 Sep 12 10:58

97905-01 Cougar Smith Park water system
Sampled By:
Sampling Date: 10 Sep 12 0:00

Test	Result	Units	Drinking Water Guideline
Alkalinity	20	mg/L (CaCO3)	
Total Ammonia (N)	<0.05	mg/L	
Chloride	1.5	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	1.1	mg/L	500 AO
Colour - True	3	Colour Units	15
pH	7.6	pH Units	6.5-8.5
Conductivity	57	uS/cm	
Iron Bacteria	none detected	cfu/mL	
Sulphur Bacteria	none detected	cfu/mL	
Corrosivity	-1.31		
T-Mercury	<0.00001	mg/L	0.001 MAC
Sulphide	<0.005	mg/L	0.05 AO
Total Coliforms (MF)	1	CFU/100mL	<1
E. coli (MF)	<1	CFU/100mL	<1
Non-Coliform Background	13	CFU/100mL	
Total Dissolved Solids	28	mg/L	500 AO
Total Organic Carbon	1.2	mg/L	
Total Organic Nitrogen	0.1	mg/L	
Total Plate Count	169	CFU/ml	
T-Aluminium	0.012	mg/L	0.1 Operational Std
T-Antimony	0.0001	mg/L	0.006 MAC
T-Arsenic	0.00006	mg/L	0.010 MAC
T-Barium	0.00279	mg/L	1.0 MAC

AO = Aesthetic Objective; MAC = Max. Allowable Concentration; IMAC = Interim MAC
> = Greater than; < = Less than

Canadian Drinking Water Guidelines as listed on Dec. 5th, 2005 and are subject to

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

97905-01 Cougar Smith Park water system
Sampled By:
Sampling Date: 10 Sep 12 0:00

Test	Result	Units	Drinking Water Guideline
T-Beryllium	<0.00005	mg/L	
T-Boron	0.008	mg/L	5 MAC
T-Bismuth	0.0002	mg/L	
T-Cadmium	0.00001	mg/L	0.005 MAC
T-Calcium	9.76	mg/L	
T-Chromium	<0.0005	mg/L	0.05 MAC
T-Cobalt	<0.0001	mg/L	
T-Copper	0.0244	mg/L	1.0 AO
T-Iron	0.021	mg/L	0.3 AO
T-Lead	0.0079	mg/L	0.010 MAC
T-Lithium	<0.0005	mg/L	
T-Magnesium	0.63	mg/L	
T-Manganese	0.0008	mg/L	0.05 AO
T-Molybdenum	0.0001	mg/L	
T-Nickel	0.0002	mg/L	
T-Potassium	<0.1	mg/L	
T-Selenium	<0.0001	mg/L	0.01 MAC
T-Silicon	1.22	mg/L	
T-Silver	<0.00001	mg/L	
T-Sodium	1.4	mg/L	200 AO
T-Strontium	0.0137	mg/L	
T-Thallium	<0.00001	mg/L	
T-Tin	0.0002	mg/L	
T-Titanium	0.0125	mg/L	
T-Uranium	<0.00001	mg/L	
T-Vanadium	0.0002	mg/L	
T-Zinc	0.0074	mg/L	5.0 AO
Hardness (CaCO3)	27	mg/L	80-100
Turbidity	<0.5	NTU's	5 AO

AO = Aesthetic Objective; MAC = Max. Allowable Concentration; IMAC = Interim MAC
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Canadian Drinking Water Guidelines as listed on Dec. 5th, 2005 and are subject to

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: Regional District of Alberni & Clayoquot
John Thomas
3008 5th Ave.
Port Alberni, BC V9Y 2E3
V9Y 2E3

Lab Number: 92717
Date Reported: 18 Jan 12
Date Completed: 18 Jan 12
Date Received: 10 Jan 12 10:50

92717-01 Alberni Valley Reg Airport
Sampled By: John
Sampling Date: 9 Jan 12 0:00

Test	Result	Units	Drinking Water Guideline
Fluoride	<0.05	mg/L	1.5 MAC
Chloride	3.0	mg/L	250 AO
Nitrate (N)	0.07	mg/L	10 MAC
Nitrite (N)	<0.05	mg/L	1 MAC
Sulphate	<0.5	mg/L	500 AO
T-Aluminium	0.041	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-Bismuth	<0.001	mg/L	
T-Boron	0.006	mg/L	5 IMAC
T-Cadmium	<0.00001	mg/L	0.005 MAC
T-Calcium	3.75	mg/L	
T-Chromium	0.0012	mg/L	0.05 MAC
T-Cobalt	0.00006	mg/L	
T-Copper	0.048	mg/L	1.0 AO
T-Iron	0.626	mg/L	0.3 AO
T-Lead	0.0083	mg/L	0.010 MAC
T-Lithium	<0.001	mg/L	
T-Magnesium	0.63	mg/L	
T-Manganese	0.04	mg/L	0.05 AO
T-Molybdenum	<0.0001	mg/L	
T-Nickel	<0.001	mg/L	
T-Phosphorus	<0.01	mg/L	
T-Potassium	<0.1	mg/L	

AO = Aesthetic Objective; MAC = Max. Allowable Concentration; IMAC = Interim MAC
> = Greater than; < = Less than

Canadian Drinking Water Guidelines as listed on Dec. 5th, 2005 and are subject to

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

92717-01 Alberni Valley Reg Airport
Sampled By: John
Sampling Date: 9 Jan 12 0:00

Test	Result	Units	Drinking Water Guideline
T-Selenium	<0.0006	mg/L	0.01 MAC
T-Silicon	3.68	mg/L	
T-Silver	0.00007	mg/L	
T-Sodium	3.3	mg/L	200 AO
T-Strontium	0.014	mg/L	
T-Thallium	<0.00001	mg/L	
T-Tin	0.0012	mg/L	
T-Titanium	0.002	mg/L	
T-Uranium	<0.0004	mg/L	0.02 MAC
T-Vanadium	0.0053	mg/L	
T-Zinc	0.014	mg/L	5 AO
Hardness (CaCO3)	12	mg/L	
Colour - Apparent	6	Colour units	15 AO
Tannins & Lignins	<0.1	mg/L	0.4 AO
UV Transmittance	98.4	%/cm	
pH	6.2	pH Units	6.5-8.5
Alkalinity	<20	mg/L (CaCO3)	
Turbidity	0.9	NTU's	5 AO
Total Dissolved Solids (conductivity ca	29	mg/L	500 AO

AO = Aesthetic Objective; MAC = Max. Allowable Concentration; IMAC = Interim MAC
> = Greater than; < = Less than

Canadian Drinking Water Guidelines as listed on Dec. 5th, 2005 and are subject to

Appendix B

Facility Sampling History

Water Sample Range Report

Vancouver Island Health Authority
Central Island

Facility Name: ALBERNI VALLEY AIRPORT
Facility Type: DWS
Date Range: Jan 1 2012 to Dec 31 2012
Date Created: Jan 23 2013

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
Airport, Alberni Valley Airport, Dist. site, Monthly				
	09/01/2012	L1	L1	
	27/02/2012	L1	L1	
	15/03/2012	L1	L1	
	30/04/2012	L1	L1	
	16/05/2012	L1	L1	
	12/06/2012	L1	L1	
	23/07/2012	L1	L1	
	08/08/2012	L1	L1	
	05/09/2012	L1	L1	
	09/10/2012	L1	L1	
	06/11/2012	L1	L1	
	10/12/2012	L1	L1	
	Total Positive:	0	0	0

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

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:	0/1	
Total number of samples:	12	

Comments:

Bacteriological results are satisfactory

Environmental Health Officer
Jan 23 2013

FOR FURTHER INFORMATION PLEASE CALL: Bruvall, Stephanie (250) 731-1315 Port Alberni

Operator

Regional District of Alberni Clayoquot
ALBERNI CLAYOQUOT REGIONAL DISTRICT
3008 5th Avenue
Port Alberni, BC
V9Y 2E3

(250) 720-2713

Water Sample Range Report

Vancouver Island Health Authority
Central Island

Facility Name: BAMFIELD COMMUNITY WWS
Facility Type: DWC
Date Range: Jan 1 2012 to Dec 31 2012
Date Created: Jan 23 2013

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
Bamfield, Butler Residence, Dist. site, Monthly				
	30/01/2012	L1	L1	
	13/02/2012	L1	L1	
	21/03/2012	L1	L1	
	04/04/2012	L1	L1	
	17/04/2012	L1	L1	
	01/05/2012	L1	L1	
	16/05/2012	L1	L1	
	01/06/2012	L1	L1	
	04/06/2012	L1	L1	
	09/07/2012	L1	L1	
	08/08/2012	L1	L1	
	10/09/2012	L1	L1	
	03/10/2012	L1	L1	
	21/11/2012	L1	L1	
	10/12/2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
Bamfield, Pump House Grappler Rd, Dist. site, Monthly				
	30/01/2012	L1	L1	
	13/02/2012	L1	L1	
	21/03/2012	L1	L1	
	04/04/2012	L1	L1	
	17/04/2012	L1	L1	
	01/05/2012	27	L1	
	16/05/2012	L1	L1	
	01/06/2012	L1	L1	
	04/06/2012	L1	L1	
	09/07/2012	L1	L1	
	08/08/2012	L1	L1	
	10/09/2012	L1	L1	
	03/10/2012	L1	L1	
	21/11/2012	L1	L1	
	10/12/2012	L1	L1	
	Total Positive:	**1**	**0**	**0**
Bamfield , Canadian Coast Guard Post, Dist. site, Monthly				
	30/01/2012	L1	L1	
	13/02/2012	L1	L1	
	21/03/2012	L1	L1	
	04/04/2012	L1	L1	
	17/04/2012	L1	L1	
	01/05/2012	L1	L1	
	16/05/2012	L1	L1	

	01/06/2012	L1	L1	
	04/06/2012	L1	L1	
	09/07/2012	L1	L1	
	08/08/2012	L1	L1	
	10/09/2012	L1	L1	
	03/10/2012	L1	L1	
	21/11/2012	L1	L1	
	10/12/2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
Bamfield, Bamfield Marine Station, Dist. site, Monthly				
	30/01/2012	L1	L1	
	13/02/2012	L1	L1	
	21/03/2012	L1	L1	
	04/04/2012	L1	L1	
	17/04/2012	L1	L1	
	01/05/2012	L1	L1	
	16/05/2012	L1	L1	
	01/06/2012	L1	L1	
	04/06/2012	L1	L1	
	09/07/2012	L1	L1	
	08/08/2012	L1	L1	
	10/09/2012	L1	L1	
	03/10/2012	L1	L1	
	21/11/2012	L1	L1	
	10/12/2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
, AUDIT-Bamfield Community Water, Dist. site, Annually				
Binnacle Road -Bamfield, Binnacle Road Reservoir, Dist. site, Monthly				
	04/04/2012	L1	L1	
	17/04/2012	L1	L1	
	01/05/2012	L1	L1	
	16/05/2012	L1	L1	
	01/06/2012	L1	L1	
	04/06/2012	L1	L1	
	09/07/2012	L1	L1	
	08/08/2012	L1	L1	
	10/09/2012	L1	L1	
	03/10/2012	L1	L1	
	21/11/2012	L1	L1	
	10/12/2012	L1	L1	
	Total Positive:	**0**	**0**	**0**

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

Samples that contain total coliform:	1	1.39% 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:	0/5	
Total number of samples:	72	

Comments:

Sampling frequency is good.

Environmental Health Officer
Jan 23 2013

FOR FURTHER INFORMATION PLEASE CALL: Bruvall, Stephanie (250) 731-1315 Port Alberni

Operator

Alberni-Clayoquot Regional District
135 Regent Street
Bamfield, BC
V0R 1B0

(250) 728-1260

Water Sample Range Report

Vancouver Island Health Authority
Central Island

Facility Name: BEAVER CREEK IMPROVEMENT DISTRICT
Facility Type: DWT
Date Range: Jan 1 2012 to Dec 4 2012
Date Created: Dec 05 2012

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
, 6287 Springfield Rd-hydrant, Dist. site, Monthly				
	10-Jan-2012	L1	L1	
	13-Feb-2012	L1	L1	
	13-Mar-2012	L1	L1	
	10-Apr-2012	L1	L1	
	14-May-2012	L1	L1	
	26-Jun-2012	L1	L1	
	24-Jul-2012	L1	L1	
	20-Aug-2012	T		
	28-Aug-2012	L1	L1	
	24-Oct-2012	L1	L1	
	19-Nov-2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
5520 Beaver Creek Road, Port Alberni, B.C., Gill School Hydrant, Dist. site, Monthly				
	16-Jan-2012	L1	L1	
	06-Feb-2012	L1	L1	
	05-Mar-2012	L1	L1	
	03-Apr-2012	L1	L1	
	07-May-2012	L1	L1	
	05-Jun-2012	L1	L1	
	16-Jul-2012	L1	L1	
	14-Aug-2012	L1	L1	
	17-Sep-2012	L1	L1	
	20-Nov-2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
6038 Beaver Creek Road, Port Alberni, B.C., Office, Dist. site, Bi-weekly				
	04-Jan-2012	L1	L1	
	09-Jan-2012	L1	L1	
	11-Jan-2012	L1	L1	
	16-Jan-2012	L1	L1	
	24-Jan-2012	L1	L1	
	25-Jan-2012	L1	L1	
	26-Jan-2012	L1	L1	
	27-Jan-2012	L1	L1	
	31-Jan-2012	L1	L1	
	13-Feb-2012	L1	L1	
	21-Feb-2012	L1	L1	
	24-Feb-2012	L1	L1	
	28-Feb-2012	L1	L1	
	28-Feb-2012 9:00:00	L1	L1	

	13-Mar-2012	L1	L1	
	19-Mar-2012	L1	L1	
	20-Mar-2012	L1	L1	
	02-Apr-2012	L1	L1	
	10-Apr-2012	L1	L1	
	23-Apr-2012	L1	L1	
	14-May-2012	L1	L1	
	22-May-2012	L1	L1	
	19-Jun-2012	L1	L1	
	04-Jul-2012	L1	L1	
	24-Jul-2012	L1	L1	
	31-Jul-2012	L1	L1	
	28-Aug-2012	L1	L1	
	05-Sep-2012	L1	L1	
	25-Sep-2012	L1	L1	
	02-Oct-2012	L1	L1	
	24-Oct-2012	L1	L1	
	29-Oct-2012	L1	L1	
	19-Nov-2012	L1	L1	
	27-Nov-2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
Port Alberni, 7296 Dashwood Rd. Standpipe, Dist. site, Monthly				
	30-Jan-2012	L1	L1	
	27-Feb-2012	L1	L1	
	26-Mar-2012	L1	L1	
	30-Apr-2012	L1	L1	
	28-May-2012	L1	L1	
	10-Jun-2012	L1	L1	
	11-Jul-2012	L1	L1	
	12-Sep-2012	L1	L1	
	10-Oct-2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
, North Reservoir, Dist. site, Monthly				
	04-Jan-2012	L1	L1	
	09-Jan-2012	L1	L1	
	11-Jan-2012	L1	L1	
	24-Jan-2012	L1	L1	
	25-Jan-2012	L1	L1	
	26-Jan-2012	L1	L1	
	27-Jan-2012	L1	L1	
	31-Jan-2012	L1	L1	
	01-Feb-2012	L1	L1	
	21-Feb-2012	L1	L1	
	24-Feb-2012	L1	L1	
	28-Feb-2012	L1	L1	
	28-Feb-2012 9:00:00 PM	L1	L1	
	19-Mar-2012	L1	L1	

	20-Mar- 2012	L1	L1	
	28-Mar-2012	L1	L1	
	02-Apr-2012	L1	L1	
	23-Apr-2012	L1	L1	
	22-May-2012	L1	L1	
	19-Jun-2012	L1	L1	
	04-Jul-2012	L1	L1	
	05-Sep-2012	L1	L1	
	02-Oct-2012	L1	L1	
	29-Oct-2012	L1	L1	
	27-Nov-2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
Port Alberni, 6000 Kitsuksis , Dist. site, Weekly				
	04-Jan-2012	L1	L1	
	09-Jan-2012	L1	L1	
	10-Jan-2012	L1	L1	
	11-Jan-2012	L1	L1	
	16-Jan-2012	L1	L1	
	30-Jan-2012	L1	L1	
	31-Jan-2012	L1	L1	
	01-Feb-2012	95.9	4.1	
	06-Feb-2012	L1	L1	
	13-Feb-2012	L1	L1	
	21-Feb-2012	L1	L1	
	27-Feb-2012	L1	L1	
	05-Mar-2012	L1	L1	
	13-Mar-2012	L1	L1	
	19-Mar-2012	L1	L1	
	26-Mar-2012	L1	L1	
	03-Apr-2012	L1	L1	
	10-Apr-2012	L1	L1	
	23-Apr-2012	L1	L1	
	30-Apr-2012	L1	L1	
	07-May-2012	L1	L1	
	14-May-2012	L1	L1	
	22-May-2012	L1	L1	
	28-May-2012	L1	L1	
	05-Jun-2012	L1	L1	
	11-Jun-2012	L1	L1	
	19-Jun-2012	L1	L1	
	26-Jun-2012	L1	L1	
	04-Jul-2012	L1	L1	
	11-Jul-2012	L1	L1	
	16-Jul-2012	L1	L1	
	24-Jul-2012	L1	L1	
	14-Aug-2012	L1	L1	
	28-Aug-2012	L1	L1	
	05-Sep-2012	L1	L1	
	12-Sep-2012	L1	L1	
	17-Sep-2012	L1	L1	
	25-Sep-2012	L1	L1	
	02-Oct-2012	L1	L1	
	24-Oct-2012	L1	L1	
	29-Oct-2012	L1	L1	
	14-Nov-2012	L1	L1	
	19-Nov-2012	L1	L1	
	27-Nov-2012	L1	L1	
	Total Positive:	**1**	**1**	**0**

, 7000 Swanson Rd-Standpipe, Dist. site, Monthly				
	06-Feb-2012	L1	L1	
	05-Mar-2012	L1	L1	
	03-Apr-2012	L1	L1	
	07-May-2012	L1	L1	
	05-Jun-2012	L1	L1	
	16-Jul-2012	L1	L1	
	14-Aug-2012	L1	L1	
	17-Sep-2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
, 6825 Lamarque Road-Standpipe, Dist. site, Monthly				
	30-Jan-2012	L1	L1	
	27-Feb-2012	L1	L1	
	26-Mar-2012	L1	L1	
	30-Apr-2012	L1	L1	
	28-May-2012	L1	L1	
	11-Jun-2012	L1	L1	
	11-Jul-2012	L1	L1	
	07-Aug-2012	L1	L1	
	12-Sep-2012	L1	L1	
	10-Oct-2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
, Kitsuksis Reservoir, Dist. site, Monthly				
	24-Jan-2012	L1	L1	
	26-Jan-2012	L1	L1	
	27-Jan-2012	L1	L1	
	24-Feb-2012	L1	L1	
	28-Feb-2012	L1	L1	
	28-Feb-2012 9:00:00 PM	L1	L1	
	21-Mar-2012	L1	L1	
	28-Mar-2012	L1	L1	
	02-Apr-2012	L1	L1	
	07-Aug-2012	L1	L1	
	21-Aug-2012	L1	L1	
	05-Sep-2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
P.A. Assoc. For Comm.Living, 5535 Maple Rd, 5535 Maple Road/P.A.Assoc.Com, Dist. site, Monthly				
	10-Jan-2012	L1	L1	
	16-Jan-2012	L1	L1	
	25-Jan-2012	L1	L1	
	25-Jan-2012	L1	L1	
	01-Feb-2012	L1	L1	
	21-Feb-2012	L1	L1	
	19-Mar-2012	L1	L1	
	23-Apr-2012	L1	L1	
	22-May-2012	L1	L1	

	19-Jun-2012	L1	L1	
	04-Jul-2012	L1	L1	
	31-Jul-2012	L1	L1	
	05-Sep-2012	L1	L1	
	02-Oct-2012	L1	L1	
	29-Oct-2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
, Pumphouse treated water, Dist. site, Bi-weekly				
	04-Jan-2012	L1	L1	
	09-Jan-2012	L1	L1	
	11-Jan-2012	L1	L1	
	24-Jan-2012	L1	L1	
	26-Jan-2012	L1	L1	
	31-Jan-2012	L1	L1	
	24-Feb-2012	L1	L1	
	28-Feb-2012	L1	L1	
	28-Feb-2012 9:00:00 PM	L1	L1	
	13-Mar-2012	L1	L1	
	20-Mar-2012	L1	L1	
	21-Mar-2012	L1	L1	
	28-Mar-2012	L1	L1	
	02-Apr-2012	L1	L1	
	11-Jun-2012	L1	L1	
	19-Jun-2012	L1	L1	
	04-Jul-2012	L1	L1	
	16-Jul-2012	L1	L1	
	24-Jul-2012	L1	L1	
	14-Aug-2012	L1	L1	
	05-Sep-2012	L1	L1	
	12-Sep-2012	L1	L1	
	17-Sep-2012	L1	L1	
	25-Sep-2012	L1	L1	
	24-Oct-2012	L1	L1	
	29-Oct-2012	L1	L1	
	05-Nov-2012	L1	L1	
	14-Nov-2012	L1	L1	
	19-Nov-2012	L1	L1	
	27-Nov-2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
, 5667 Chapman Road, Dist. site, Monthly				
	30-Jan-2012	L1	L1	
	01-Feb-2012	L1	L1	
	27-Feb-2012	L1	L1	
	26-Mar-2012	L1	L1	
	30-Apr-2012	L1	L1	
	28-May-2012	L1	L1	
	11-Jun-2012	L1	L1	
	11-Jul-2012	L1	L1	
	07-Aug-2012	L1	L1	
	12-Sep-2012	L1	L1	
	10-Oct-2012	L1	L1	
	05-Nov-2012	L1	L1	
	Total Positive:	**0**	**0**	**0**

, 5780 Beaver Creek Road, Dist. site, No Regular Sampling

Port Alberni, Fresh Water, Dist. site, No Regular Sampling

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

Samples that contain total coliform:	1	0.45% of total
Samples that contain e. coli:	1	0.45% of total
Samples that contain fecal coliform:	0	0.00% of total
Number of positive samples in last 30 days:	0/13	
Total number of samples:	220	

Comments:

Environmental Health Officer
Jan 23 2013

FOR FURTHER INFORMATION PLEASE CALL: Bruvall, Stephanie (250) 731-1315 Port Alberni

Operator

Beaver Creek Improvement District
B 6038 Beaver Creek Road
Port Alberni, BC
V9Y 8X4

(250) 723-9371

Water Sample Range Report

Vancouver Island Health Authority

Central Island

Facility Name: BEAVER CREEK WATER SYSTEM
Facility Type: DWT
Date Range: Jan 1 2012 to Dec 31 2012
Date Created: Jan 23 2013

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
7656 Beaver Creek Road, North Reservoir, Dist. site, Monthly				
7702 Sportsman Road, Pumphouse Treated, Dist. site, Bi-weekly				
	18/12/2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
7702 Sportsman Road, Pumphouse-RAW-Water, Dist. site, Bi-weekly				
	18/12/2012	70	4	
	Total Positive:	**1**	**1**	**0**
6000 Kitsuksis Road, Kitsuksis Road, Dist. site, Weekly				
	05/11/2012	L1	L1	
	18/12/2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
6287 Springfield Road, Springfield Road, Dist. site, Monthly				
	18/12/2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
7271 Thompson Road, Thompson Road, Dist. site, Monthly				
	14/11/2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
7000 Swanson Road, Swanson Road, Dist. site, Monthly				
	14/11/2012	L1	L1	
	11/12/2012	L1	L1	
	Total Positive:	**0**	**0**	**0**

5520 Beaver Creek Road, Gill School Hydrant, Dist. site, Monthly				
	14/11/2012	3	L1	
	11/12/2012	L1	L1	
	Total Positive:	1	0	0
5535 Maple Road, 5535 Maple Road, Dist. site, Monthly				
	27/11/2012	L1	L1	
	Total Positive:	0	0	0
5667 Chapman Road, 5667 Chapman Road, Dist. site, Monthly				
	04/12/2012	L1	L1	
	Total Positive:	0	0	0
6210 Drinkwater Road, 6210 Drinkwater Road, Dist. site, Monthly				
6825 Lamarque Road, 6825 Lamarque Road, Dist. site, Monthly				
	05/11/2012	L1	L1	
	Total Positive:	0	0	0
7296 Dashwood Road, Dashwood Road, Dist. site, Monthly				
	05/11/2012	L1	L1	
	Total Positive:	0	0	0
Shop Building Tap , 6038 Beaver Creek Road, Dist. site, Bi-weekly				
	18/12/2012	L1	L1	
	Total Positive:	0	0	0

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

Samples that contain total coliform:	2	13.33% of total
Samples that contain e. coli:	1	6.67% of total
Samples that contain fecal coliform:	0	0.00% of total
Number of positive samples in last 30 days:	1/8	
Total number of samples:	15	

Comments:

Environmental Health Officer
Jan 23 2013

FOR FURTHER INFORMATION PLEASE CALL: Bruvall, Stephanie (250) 731-1315 Port Alberni

Operator

Alberni-Clayoquot Regional District
3008 5th Avenue
Port Alberni, BC
V9Y 2E3

(250) 720-2713

Water Sample Range Report

Vancouver Island Health Authority

Central Island

Facility Name: MILLSTREAM COMMUNITY WATER SYSTEM
Facility Type: DWC
Date Range: Jan 1 2012 to Dec 31 2012
Date Created: Jan 23 2013

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
2355 Ucluelet & Tofino Highway, AUDIT - Daley Residence Hose Bib, Dist. site, No Regular Sampling				
262 Karn Avenue, McConnell Residence, Dist. site, Monthly				
	10/01/2012	L1	L1	
	22/02/2012	L1	L1	
	20/03/2012	L1	L1	
	18/04/2012	L1	L1	
	16/05/2012	L1	L1	
	26/06/2012	L1	L1	
	11/07/2012	L1	L1	
	20/08/2012	L1	L1	
	18/09/2012	L1	L1	
	06/11/2012	L1	L1	
	21/11/2012	L1	L1	
	18/12/2012	L1	L1	
	Total Positive:	0	0	0
, John Gouweleeuw's Residence, Dist. site, Monthly				
	10/01/2012	L1	L1	
	22/02/2012	L1	L1	
	20/03/2012	L1	L1	
	18/04/2012	L1	L1	
	16/05/2012	L1	L1	
	26/06/2012	L1	L1	
	11/07/2012	L1	L1	
	20/08/2012	L1	L1	
	18/09/2012	L1	L1	
	06/11/2012	L1	L1	
	21/11/2012	L1	L1	
	18/12/2012	L1	L1	
	Total Positive:	0	0	0

Raw water -Millstream, Raw water-Millstream (well), Dist. site, No Regular Sampling

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

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:	0/2	
Total number of samples:	24	

Comments:

Bacteriological results are satisfactory.

Environmental Health Officer
Jan 23 2013

FOR FURTHER INFORMATION PLEASE CALL: Bruvall, Stephanie (250) 731-1315 Port Alberni

Operator

Millstream Community W. S. (A-CRD)
3008 Fifth Street
Port Alberni, BC
V9Y 2E3

(250) 726-7755

Water Sample Range Report

Vancouver Island Health Authority

Central Island

Facility Name: TOFINO AIRPORT WATER SYSTEM
Facility Type: DWS
Date Range: Jan 1 2012 to Dec 31 2012
Date Created: Jan 23 2013

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
Pumphouse/Estowista, Dist. site, Monthly				
	10/01/2012	L1	L1	
	22/02/2012	L1	L1	
	20/03/2012	L1	L1	
	18/04/2012	L1	L1	
	16/05/2012	L1	L1	
	26/06/2012	L1	L1	
	11/07/2012	L1	L1	
	20/08/2012	L1	L1	
	18/09/2012	L1	L1	
	06/11/2012	L1	L1	
	21/11/2012	L1	L1	
	18/12/2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
Reservoir/pumphouse, Dist. site, Monthly				
	10/01/2012	L1	L1	
	22/02/2012	L1	L1	
	20/03/2012	L1	L1	
	18/04/2012	L1	L1	
	16/05/2012	L1	L1	
	26/06/2012	L1	L1	
	11/07/2012	L1	L1	
	20/08/2012	L1	L1	
	18/09/2012	L1	L1	
	06/11/2012	L1	L1	
	21/11/2012	L1	L1	
	18/12/2012	L1	L1	
	Total Positive:	**0**	**0**	**0**
Washroom, AUDIT-Golf Course , Dist. site, No Regular Sampling				

AUDIT - TOFINO AIRPORT WATER SYSTEM, AUDIT - TOFINO AIRPORT WATER SYSTEM, Dist. site, Annually				
	26/06/2012	L1	L1	
	Total Positive:	0	0	0
Tofino Airport, Terminal Building , Dist. site, Monthly				
	11/07/2012	L1	L1	
	20/08/2012	L1	L1	
	18/09/2012	L1	L1	
	06/11/2012	L1	L1	
	21/11/2012	L1	L1	
	18/12/2012	L1	L1	
	Total Positive:	0	0	0

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

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:	0/3	
Total number of samples:	31	

Comments:

Sampling frequency is satisfactory; bacteriological results are good.

Environmental Health Officer
Jan 23 2013

FOR FURTHER INFORMATION PLEASE CALL: Bruvall, Stephanie (250) 731-1315 Port Alberni

Operator

Regional District of Alberni Clayoquot
PO Box 905 Avenue
Port Alberni, BC
V0R 3A0

(250) 726-7755

Appendix C

Drinking Water Quality Links

Drinking Water Quality Links:

- Guidelines for Canadian Drinking Water Quality
http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/index-eng.php

- Drinking Water Protection Act:
http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_01009_01

- Drinking Water Protection Regulation:
http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/10_200_2003

- The Environmental Operators Certificate Program:
http://www.eocp.org/

- British Columbia Water and Wastewater Association:
http://www.bcwwa.org/

- Vancouver Island Health Authority – Water Quality
http://www.viha.ca/mho/water/

Appendix C

Drinking Water Quality Links

Drinking Water Quality Links:

- Guidelines for Canadian Drinking Water Quality
http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/index-eng.php

- Drinking Water Protection Act:
http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_01009_01

- Drinking Water Protection Regulation:
http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/10_200_2003

- The Environmental Operators Certificate Program:
http://www.eocp.org/

- British Columbia Water and Wastewater Association:
http://www.bcwwa.org/

- Vancouver Island Health Authority – Water Quality
http://www.viha.ca/mho/water/