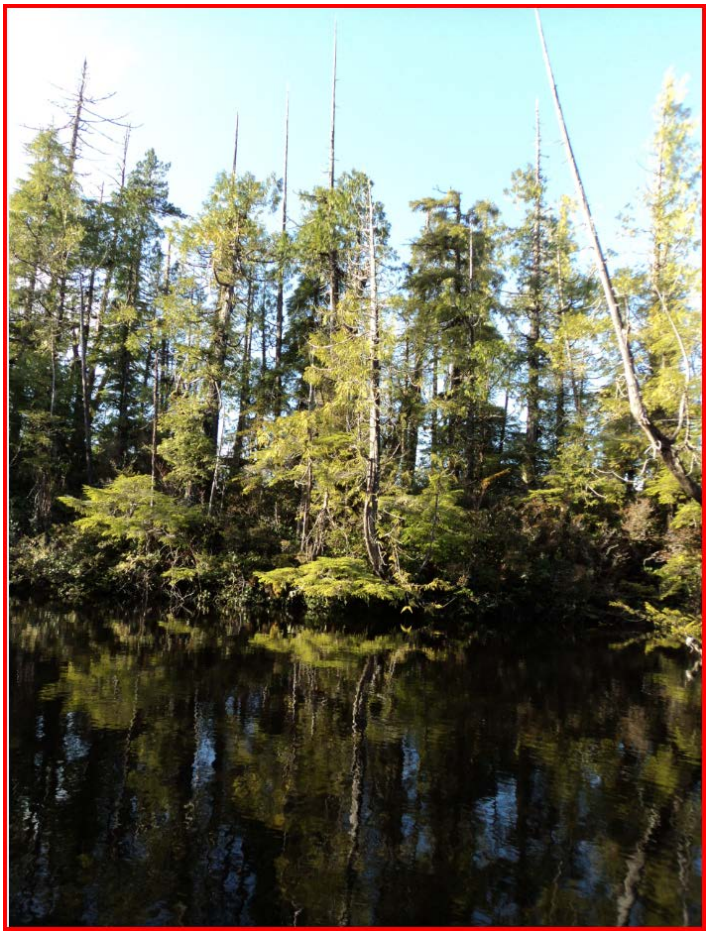
ALBERNI CLAYOQUOT REGIONAL DISTRICT

WATER SYSTEMS ANNUAL REPORT 2015



Alberni Clayoquot Regional District Water Systems:

Beaver Creek Water System
Bamfield Community Water System
Alberni Valley Regional Airport
Long Beach Airport Water System
Millstream Community Water System
Cougar Smith Park Water System

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Table of Contents **Page #**

1.0 Introduction to the Alberni Clayoquot Regional District Water System's

This annual water systems report provides an overview of the Alberni-Clayoquot Regional District's (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 water consumers to review their individual water system in order to be aware of the service provided and the annual activities.

The Province of British Columbia's Drinking Water Protection Act and the Drinking Water Protection Regulation prescribes the required performance of drinking water suppliers. An example of the performance is that the supplier must all times provide potable water and monitor its sources. Other required performances can be seen in Section 15 of the Act and Section 11 of the Regulation. The provincial governance is distributed to local health authorities. The ACRD falls under the Island Health Authority (IHA), whose mission is to minimize health risks to the public and to assist with providing safe drinking water to our communities. This is looked after by IHA's Public Health Engineer and the Environmental Health Officer, who evaluates water sources, grants permits and performs inspections. Please see Appendix C for drinking water web links for more information regarding legislative authority and responsibility.

The Alberni-Clayoquot Regional District owns and operates six individually distinct potable water systems. This report will provide an annual review of each systems operation and water quality. The water systems names are in order below with the highest to lowest annual volumes of water produced:

1. Beaver Creek Water System

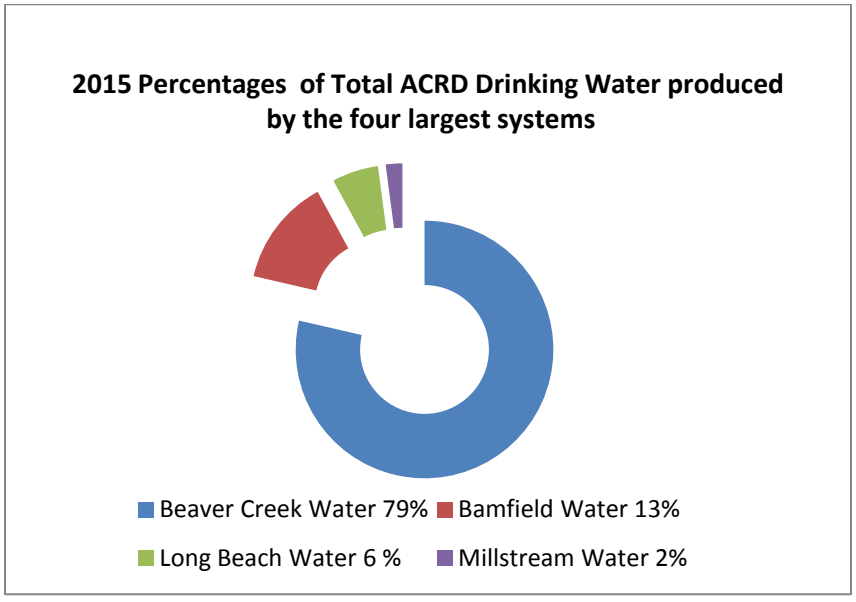
2. Bamfield Community Water System

3. Long Beach Airport Water System

4. Millstream Community Water System

5. Cougar Smith Park Water System

6. Alberni Valley Airport Water System



1.1 Management

The ACRD's Environmental Services Department is responsible for the overall management of the water systems including administrative services. All the water systems are maintained by Environmental Operators Certificate Program's (EOCP) certified operators. "The purpose of the EOCP Facility Classification and Operator Certification policy is to set out the standards and requirements for classifying facilities and certifying operators to ensure that Operator qualifications and experience match the complexities of the facilities they operate." The Drinking Water Protection Act and its Regulation requires persons operating water supply systems to be qualified by the Environmental Operators Certification program for that classification of the facility. Facility classification is to ensure that all facilities are classified based on the size and complexity of the facility in order to establish level of skill and knowledge of the operator(s) of the facility. The Small Water Systems (SWS) facility classification is the least complex classification that increases to a maximum classification of a Water Distribution Level 4 (WD 4).

The following is a list of ACRD Water Distribution systems and operations:

Water System	EOCP Facility #	Level	Operation By:
Alberni Valley Airport	2139	SWS	ACRD employees
Cougar Smith Park	2141	SWS	ACRD employees
Beaver Creek	431	WD2	ACRD employees
*new for 2015, Water Distribution level reduce from WD3			
Millstream	2143	SWS	Contract employee
Long Beach Airport	2142	SWS	Contract employee
Bamfield	2140	WD2	Contract employee
Bamfield	2304	WT2	Contract employee
*New for 2015, Bamfield Water Treatment Facility			

1.2 Operations

The ACRD regularly performs tests to ensure that the water is meeting all standards. A complete water potability test of the water is performed regularly. The water systems operators regularly check the disinfection and safety of the drinking water. With the systems with chlorine disinfection, the Free Chlorine residual is measured daily. Free Chlorine is defined as the remaining chlorine in the water after initial disinfection that is available for chemical and biological reactions. The operators try to obtain a reading of 0.2 mg/l of Free Chlorine at all the ends of the distribution system. The systems with Ultraviolet Disinfection (UV) lights are checked weekly to make sure the light intensity is adequately disinfecting the water. UV systems disinfect water using radiation to inactivate organisms so that they cannot reproduce and cause health concerns.

Water samples for bacteria are currently taken weekly from the Beaver Creek Water System and monthly from the small water systems. These samples are submitted to the Island Health Authority (IHA) and are analyzed by the British Columbia Center for Disease Control for bacteria and specifically Total Coliforms and E. Coli.

The Total Coliforms and E.Coli organisms are typically only tested as they are good indicator organisms. Indicator organisms are easy and inexpensive to test for, can be correlated with the potential contamination level and are not present in unpolluted waters.

The IHA's Environmental Health Officer regularly inspects all permitted drinking water systems. The most current inspection reports for each water system can be found in Appendix D.

To ensure good water quality throughout the distribution system water system mains are regularly flushed. This flushing action removes any accumulated silt in the water mains by creating an increase in velocity to scour the pipes. Flushing also refreshes the mains of any standing water with clean water that has an active Free Chlorine level that ensures disinfection.

Regular sampling of drinking water is conducted for physical, chemical and biological parameters. This sampling is to ensure that the drinking water meets the Health Canada Canadian Drinking Water Guidelines. Each water system is provided with an Operational Certificate by IHA that may outline specific requirements such as individual tests and the frequency. Where the requirements are not outlined, testing is performed at a frequency approved by IHA and the ACRD Board of Directors.

ALBERNI CLAYOQUOT REGIONAL DISTRICT

BEAVER CREEK WATER SYSTEM

ANNUAL REPORT

2015

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2.1 Beaver Creek Water System Introduction

This is a community of 3,045 (2011 Census) 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 ACRD on June 1st, 2012. Beaver Creek Water System has an advisory committee made up of the Beaver Creek Electoral Director and volunteer members from the community. This committee provides guidance and advice to the ACRD management regarding infrastructure improvements, bylaws and costs.

2.2. System Overview

The majority of the Beaver Creek Water System (BCWS) was constructed in the 1960's. The water mains were originally constructed with asbestos cement pipe and more recent improvements were with polyvinyl pipe. Historically, the source water was from the Stamp River accessed through an infiltration gallery. In April, 2014 the BCWS changed the primary source water to the City of Port Alberni through the new Strick Road Pump Station. The change in source water allowed the residents of Beaver Creek to feel a sense of security of having uninterrupted safe water. The treated water from the City of Port Alberni prevented any need for any "boil water" orders by eliminating any high turbidity events from the Stamp River. The pump station was built on Strick Road to connect to and boost the pressure from the City to the BCWS. To accommodate the increase in pressure and flow the Strick Road water main was replaced in 2014.

The Beaver Creek Water System has three reservoirs:

- Concrete reservoir on Kitsuksis Road, Volume of 1,135 cubic meters
- Bolted steel reservoir on Beaver Creek Road, Volume of 273 cubic meters
- Glass fused reservoir on Kitsuksis Road, Volume of 1,135 cubic meters

Distribution System:

- Disinfection: Chlorine
- Service connections: 993
- 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 (67.5%) of the distribution system is Asbestos Cement (AO)
- The remainder is made up of polyvinyl chloride (PVC)
- Average daily flow: 1080 cubic meters

2.3 Water Quality and Consumption

The 2015 total water consumption for the BCWS was 394,019 cubic meters. This was the first year that the total amount of the source water for the BCWS was received from the City of Port Alberni. As this water was pretreated by the City there was no need for any boil water advisories.

The water being received by the BCWS from the City of Port Alberni was tested on October 30th 2014 for complete potability. The results from this test are in Appendix A. The Operations Permit issued by Island Health requires quarterly testing for chlorine disinfection byproducts which occurred in April, July, October and December of 2015. Disinfection byproducts are created when chlorine (used as a disinfectant) reacts with organic compounds in the water. Typical disinfection byproducts created by the addition of chlorine are Trihalomethanes (THM's) and Haloacetic Acids (HAA's).

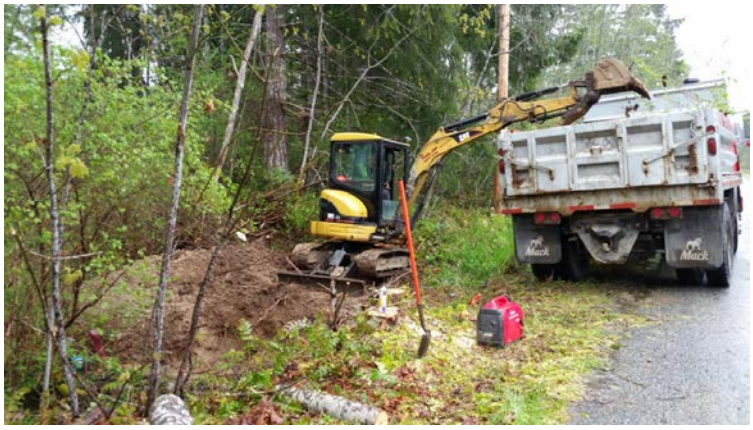
The Total Trihalomethanes (THM) maximum acceptable concentrations (MAC) by the Canadian Drinking Water Guidelines are 100 ug/L based on a running average of a minimum quarterly sampling. The values obtained at the pumphouse and the reservoirs were all under the MAC individual testing and the quarterly average. The Total Haloacetic Acids (HAA) maximum acceptable concentrations (MAC) by the Canadian drinking Water Guidelines are 80 ug/L based on a running average of a minimum quarterly sampling. The values obtained at the pump house and the reservoirs were all under the MAC running average but had individual testing above in March and December. The results from these tests are in Appendix A.

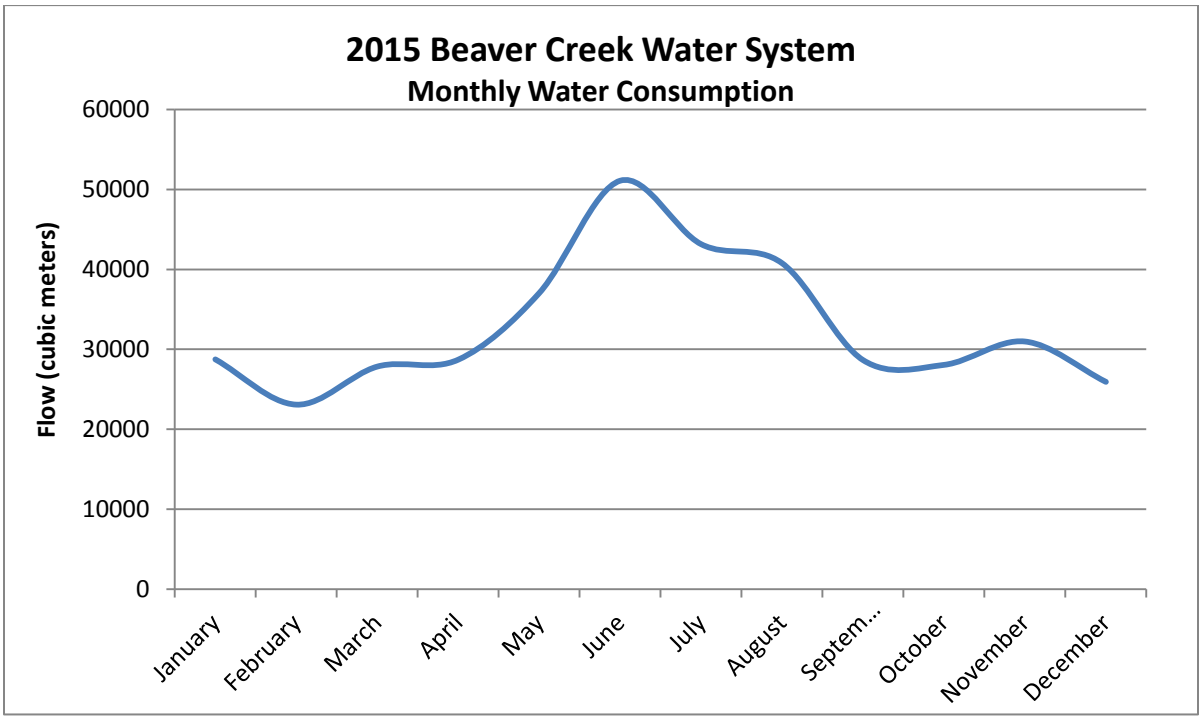
In 2015 the Environmental Operators Certificate Program's (EOCP) has reclassified the Beaver Creek Water System down from a Class 3 to a Class 2. This was due to the change in the BCWS source water from the Stamp River to the water system purchasing bulk treated water from the City of Port Alberni. This change occurred due to the Stamp River source having high turbidity (cloudiness or haziness) during high rainfall events requiring the implementation of boil water advisories.

2.4 2015 Projects

- The original Kitsuksis concrete reservoir was repaired, cleaned and brought into full time service. This reservoir previously had a constant leak and was only used during summer months.

- The Grandview Road water main had a significant portion replaced due to the poor condition of the asbestos cement pipe. This replacement project will save on future financial costs of emergency repairs and create better quality water by creating a loop into Drinkwater Road.




2015 Beaver Creek Water System
Monthly Water Consumption
Flow (cubic meters)
60000
50000
40000
30000
20000
10000
0
January
February
March
April
May
June
July
August
Septem...
October
November
December

ALBERNI CLAYOQUOT REGIONAL DISTRICT

BAMFIELD WATER SYSTEM

ANNUAL REPORT

2015

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3.1 Bamfield Community Water System Introduction

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 1800's. Bamfield is divided into two sides, 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 harbor side. The east side of Bamfield contains most of the retail businesses, including a pub, a market and café.

In Bamfield there is a water committee that works with the ACRD in determining the direction and operation of the water system. The committee is made up 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 (BWS). The water operator is certified through the Environmental Operators Certificate Program (EOCP) to operate the Level 2 Water Distribution System.

In 2015, the EOCP implemented the additional classification of a Water Treatment 2 Classification to the Bamfield Water System. The water operator through training and examination has obtained a Level 1 Water Treatment Certification. The EOCP requires a certification level at or above the facility classification. The operator will be acquiring this certification as soon as possible.

3.2 System Overview

- Water Source: Sugsaw Lake
- Treatment: Fine screen and chlorine disinfectant
- Reservoirs: Two bolted steel reservoirs
- Service Connections: 297
- Length of mains: App. 4550 meters of 150mm
  App.1300 meters of 100mm
  App. 5175 meters of 50mm
  App. 325 meters of 25mm
- Water main material: Polyvinyl Chloride (PVC) and Polyethylene (PE)
- Average daily flow: 185 cubic meters

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

The BWS has experienced distribution water leaks caused by dissimilar metals and exposed pipes, which are subject to freezing. During a power outage a backup generator provides electricity to prevent any disruption to the water supply.

3.3 Water Quality and Consumption

The 2015 water consumption for Bamfield was 67,605 cubic meters. This is an increase of 36% from the 2014 consumption. The reason for this is increase is from a combination of the installation of automatic flushing devices and a dry hot summer.

Bamfield's water system is wholly supplied with water from Sugsaw Lake. Sugsaw Lake's water quality is typical of most west coast watersheds as the lake is surrounded by forests that produce soluble organics from the decomposition of the trees and vegetation. These natural organic substances are often described as Tannins and Lignins that create a "tea" colour to the water. The addition of chlorine for water disinfection reacts with the organics and colour to create disinfection byproducts. These low levels of disinfection byproducts found in Bamfield's distribution system have exceeded the Canadian Drinking Water Guidelines. The disinfection byproducts that are typically produced with chlorine disinfection are Trihalomethanes (THM) and Total Halo Acetic Acids (HAA). With Bamfield only having exceedance with the THM's that are above the guideline of 100 parts per billion.

A water quality advisory was issued by Island Health in November of 2013. Island Health states there is no immediate risk to your health and any effects are associated with consumption of high levels for many years or decades. Exposure can be reduced by storing water for 24 hours, boiling and cooling, filtering water with activated carbon, or by using bottled water.

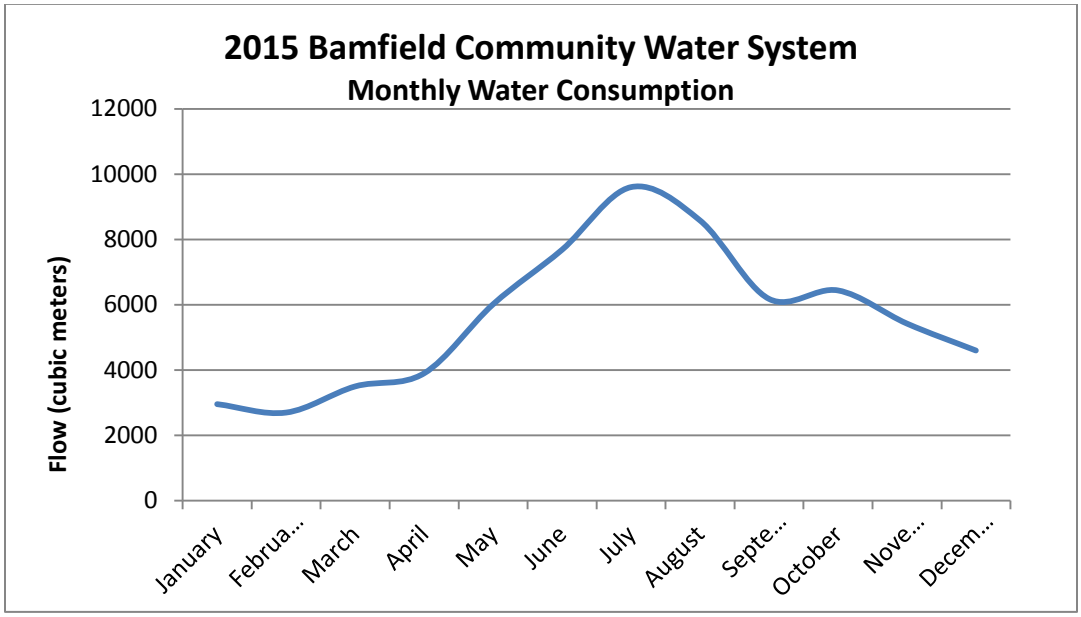
Monitoring the chlorinated water for THM levels continue at quarterly intervals. Sugsaw Lake is also being monitored quarterly for the precursors for disinfection byproducts at three locations. These additional locations are being monitored in order to determine if better quality water can be found at different locations and depths. The results from this testing in Sugsaw Lake and the reservoir can be seen in Appendix A.

In the fall of 2014 a "pilot treatment plant" was successfully operated and determined that a DAF treatment plant (dissolved air floatation) would remove the THM precursors. Preliminary construction costs for a permanent water treatment plant were estimated at 1.5 million. A grant application for a "New Building Canada Fund" was applied for but was not selected for funding. To fund this project, further grant applications and other financial avenues will be pursued.

Appendix B shows the 2015 Bamfield microbiological sampling history provided by Island Health. All the results showed no presence of E. Coli and only one occurrence of total coliforms, that can be attributed to error. In March a parasite test (Giardia and Cryptosporidium) was performed on the source water and none were detected.

3.4 2015 Projects

- Quarterly water quality sampling at Sugsaw Lake and the reservoirs
- Two automatic flushing devices were installed in order to keep the water fresh
- Reservoir #2 was cleaned by Walco Industries
- The pumphouse backup generator had an annual service performed by Simson-Maxwell
- All fire hydrants had their annual service
- A one inch service water line was laid under the Bamfield Inlet from Burlo Island to the Westside
- The raw water line from Sugsaw Lake that enters the Grappler Village had a leak repaired

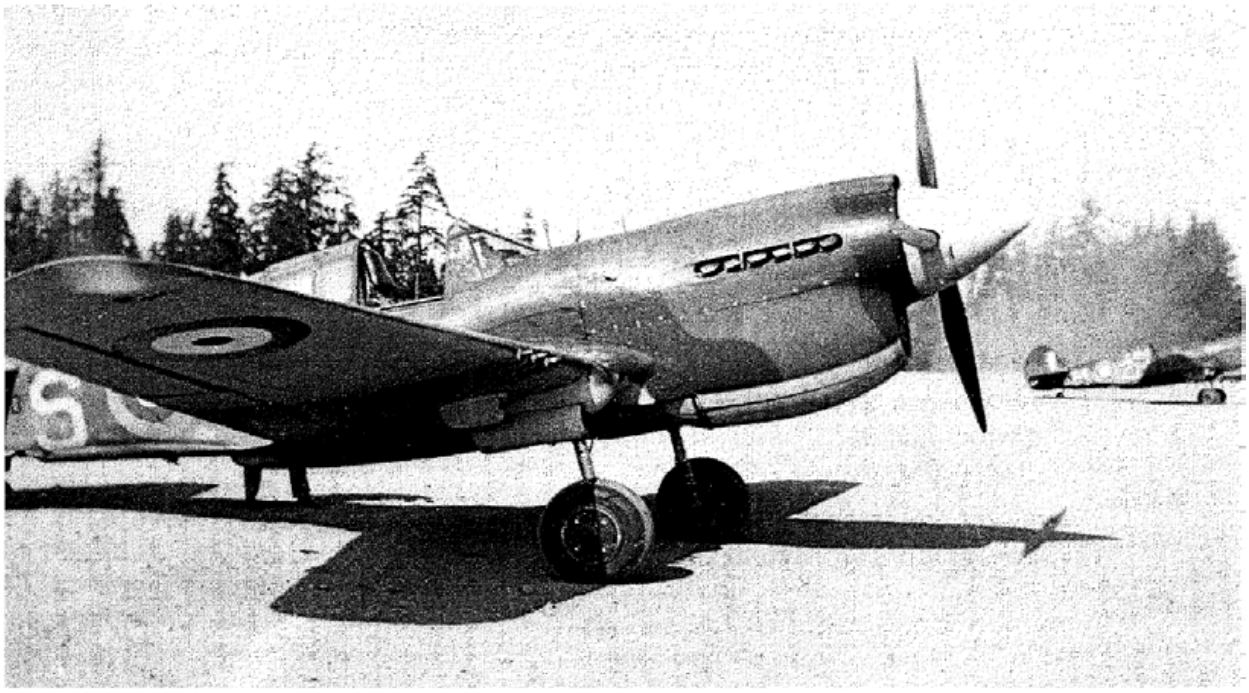


ALBERNI CLAYOQUOT REGIONAL DISTRICT

LONG BEACH AIRPORT WATER SYSTEM

ANNUAL REPORT

2015



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4.1 Long Beach Airport Water System Introduction

The Long Beach Airport Water System (LBAWS) is located within the Long Beach Airport across from Long Beach of the Pacific Rim National Park. The airport is located between the Districts of Tofino and Ucluelet, on the west coast of Vancouver Island. The LBAWS was originally constructed during World War 2 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, pumphouse, 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 building and the Long Beach Golf Course. A contracted water operator runs the day to day operations of the LBAWS. The water operator is certified through the Environmental Operator Certificate Program (EOCP) to operate small water systems.

4.2 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 meters of cast iron & 188 meters of PVC
Average daily flow: 82 m3

4.3 Water Quality and Consumption

The 2015 water consumption for the Long Beach Airport Water System was 29,200 cubic meters. The majority of the water is supplied to the Tla-O-Qui-Aht First Nations' Esowista and Ty-Histanis community lands.

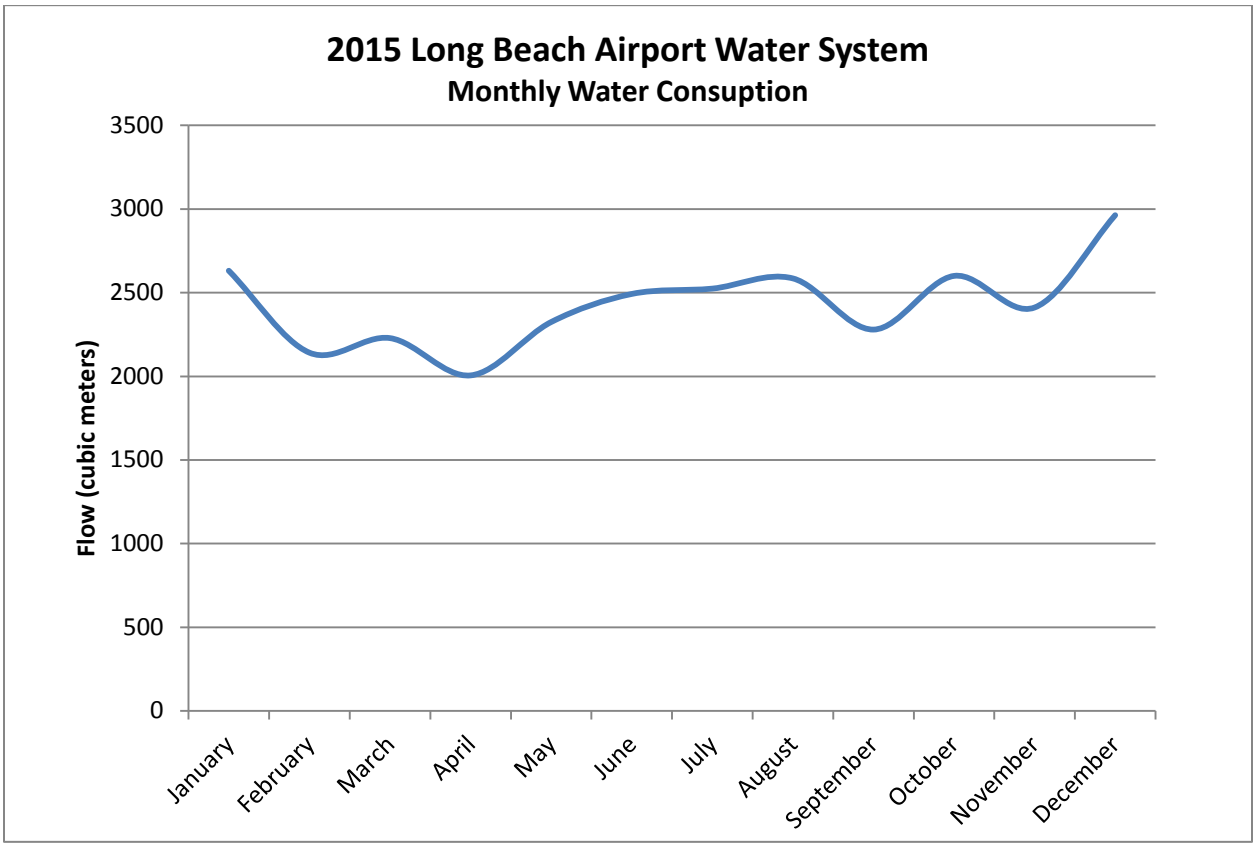
The Long Beach Airport raw well water is high in iron and manganese, which is typical of ground water in that area (see Appendix A). The ion exchange water treatment removes these metals as well as the turbidity, as can be seen in the filtered water results. In the ion exchange treatment, sodium is released into the water which increased the results to 74 mg/L. This value is still lower than the Canadian Drinking Water Guidelines for aesthetic objectives of 200 mg/L.

Appendix B shows the 2015 Long Beach Airport microbiological sampling history provided by Island Health. All the results show no Total Coliforms or E.Coli.

Island Health performed an inspection of the Long Beach Airport Water System in March 2013, which was given a low hazard rating. Low hazard rating is the lowest rating in Island Health's scale.

4.4 2015 Projects

- Rebuilt the reservoir access hatch as the original (1940's vintage) concrete was deteriorating.


2015 Long Beach Airport Water System
Monthly Water Consuption
Flow (cubic meters)
3500
3000
2500
2000
1500
1000
500
0
January
February
March
April
May
June
July
August
September
October
November
December

ALBERNI CLAYOQUOT REGIONAL DISTRICT

MILLSTREAM WATER SYSTEM

ANNUAL REPORT

2015

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5.1 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.

5.2 System Overview

- Water source: Two shallow dug wells, 4.1 and 3.6 meters deep
- Treatment: none
- Disinfection: Chlorine
- Reservoir: Bolted steel, 656 m3
- Service connections: 50
- Length of mains: 725 meters of 100mm & 255 meters of 150mm
- Water main material: asbestos cement (AC) & polyvinyl chloride (PVC)
- Average daily flow: 29 m3

5.3 Water Quality and Consumption

The 2015 water consumption for the Millstream water system was 10,453 cubic meters. The monthly water consumption graph shows a typical community with increasing use during the summer months.

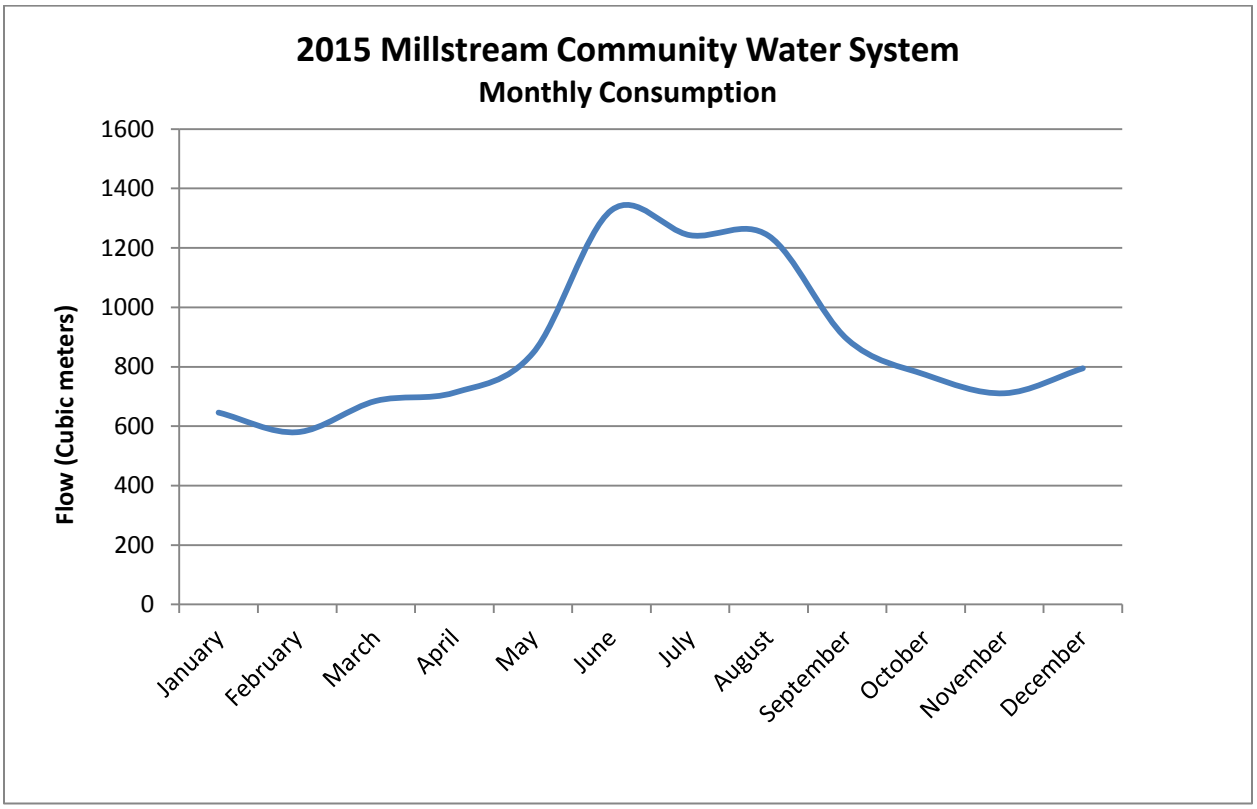
Appendix B shows the 2015 Millstream microbiological monthly sampling history provided by Island Health. All the results show no Total Coliforms or E. coli.

Island Health performed an inspection of the water system in January 2014, which can be found in Appendix A. No violations were reported and the facility was given a low hazard rating. Low Hazard rating is the lowest rating in Island Health's scale.

The most recent potability test was completed on the well water (raw) in December 2013, as can be seen in Appendix A. The water quality is very good with very little bacteria, which shows there is very little surface influence.

5.4 2015 Projects

- The reservoir cleaning and inspection was organized for 2016. Within the project a mixing pump was purchased for the purpose of creating better water quality.



ALBERNI CLAYOQUOT REGIONAL DISTRICT

COUGAR SMITH PARK WATER SYSTEM

ANNUAL REPORT

2015

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6.1 Cougar Smith Park

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.

6.2 System Overview

Water source: Sproat Lake
Treatment: Micro filtration
Disinfection: Ultraviolet (UV)
Reservoir: no reservoir
Service Connections: Two connections
Length of Mains: 144 meters of 31.75 mm
Water main material: Polyethylene (PE)
Average Daily Flow: 6 m3

The water system infrastructure is located within the public building and a private property adjacent to the lake. Within the building is a pressure tank, an ultraviolet light disinfection system and a 5 micron particulate filter. The water system supplies two public washrooms, an irrigation system, a drinking water fountain and the caretaker's residence.

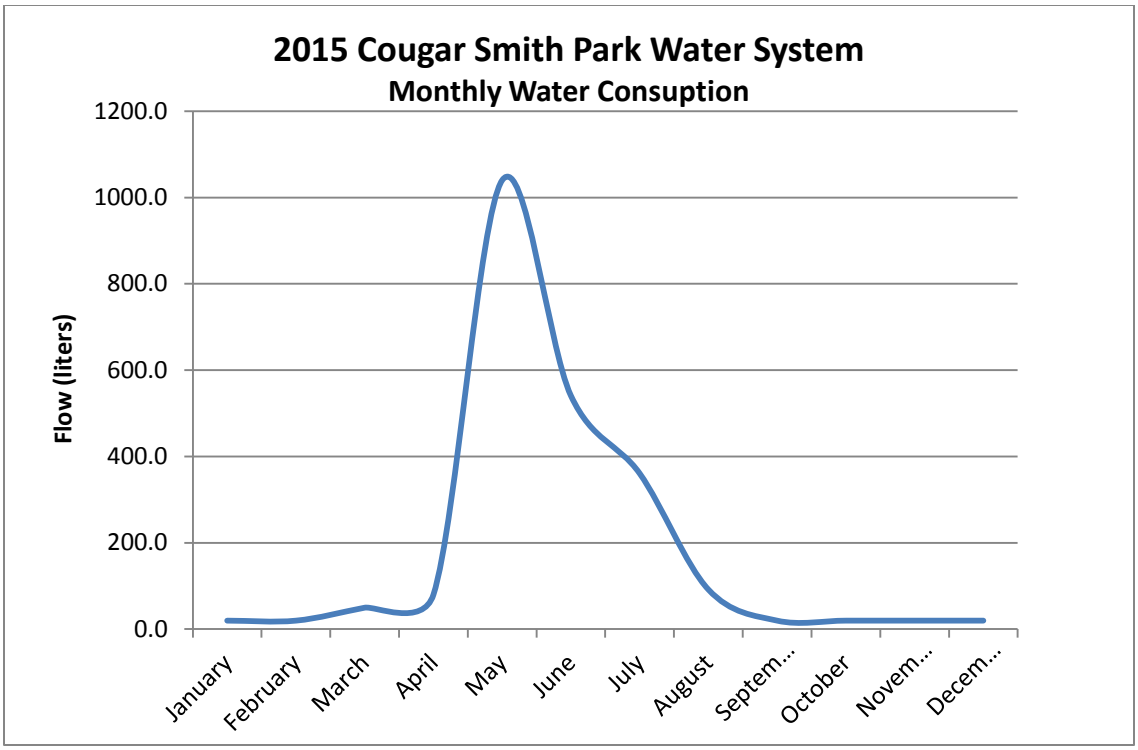
6.3 Water Quality and Consumption

The 2015 water consumption for Cougar Smith Park was 2,148 cubic meters. The monthly consumption graph shows a dramatic seasonal increase due to the irrigation of the baseball diamond and water used for the bike park. The bike park uses water in maintaining the bike runs and jumps.

Appendix B shows the 2015 Cougar Smith Park microbiological sampling history provided by Island Health. All the results show no Total Coliforms or E. coli in the distribution system. Island Health is now providing the bacteria analyses.

Island Health is currently reviewing an application to certify the water system. Once certified, Island Health will provide inspections to ensure the water system is being safely operated. The water system's operation is currently being checked weekly by ACRD staff and by the resident caretaker. The water system has a fail-safe shut off switch if the UV system fails, which prevents untreated water entering the system.

The most recent potability test was completed in December 2013 as can be seen in Appendix A. The water quality is good and there is no concerns indicated from the potability test.


2015 Cougar Smith Park Water System
Monthly Water Consuption
Flow (liters)
1200.0
1000.0
800.0
600.0
400.0
200.0
0.0
January
February
March
April
May
June
July
August
Septem...
October
Novem...
Decem...

ALBERNI CLAYOQUOT REGIONAL DISTRICT

ALBERNI VALLEY REGIONAL AIRPORT WATER SYSTEM
ANNUAL REPORT
2015

Prepared by: John Thomas
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7.1 Alberni Valley Regional Airport Small Water System Introduction

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

7.2 System Overview

Water Source: Shallow dug well to 5.5 meters deep
Treatment: Microfiltration
Disinfection: Ultraviolet light (UV)
Reservoir: no reservoir
Service connections: Three
Length of Mains: Approximately 350 meters of 38mm
Water Main Material: Polyethylene (PE)
Average Daily Flow: 0.8 m3

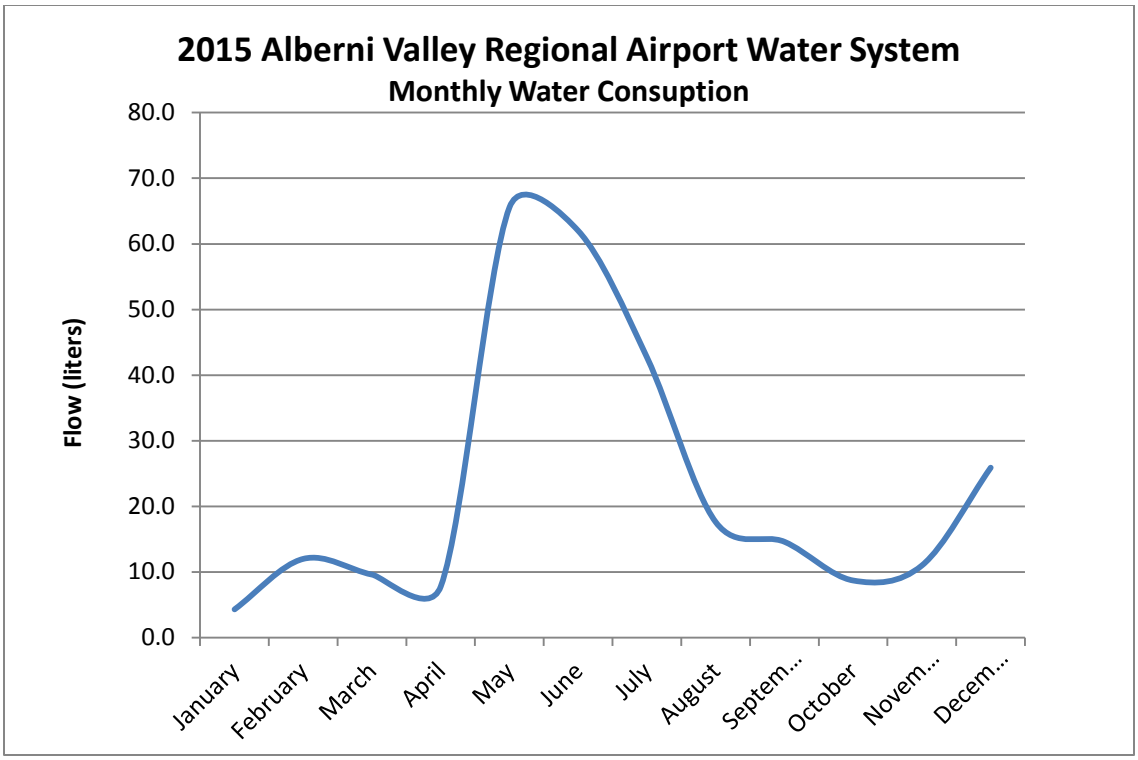
7.3 Water Quality and Consumption

The 2015 water consumption for the AVRA was 281 cubic meters. The monthly water consumption graph shows a significant peak in water demand during the summer months due to an increase of use of the airport terminal building, irrigation and the 2015 drag racing event. There is a small increase of water use during the winter months where water has been left running to reduce the risk of freezing pipes.

Appendix B shows the 2015 AVRA microbiological monthly sampling history provided by Island Health. All results show no Total Coliforms or E. coli.

Island Health performed an inspection of the AVRA in February 2014, which can be found in Appendix D. No significant violations were reported and the facility was given a low hazard rating. "Low hazard rating" is the lowest rating in the Island Health's scale. A recommendation was written that the system be monitored frequently to ensure the system is working properly. The water system's operation is currently being checked weekly by ACRD staff and the resident caretaker. The water system has a fail-safe shut off switch if the UV system fails, which prevents untreated water from entering the system.

The most recent potability test was completed in January 2012 as can be seen in Appendix A. Iron (0.626 mg/L) was higher than the Canadian Drinking Water Guidelines Aesthetic Objective of 0.3 mg/L. Higher levels of iron is typical of groundwater in the area and is not a health concern.


2015 Alberni Valley Regional Airport Water System
Monthly Water Consuption
Flow (liters)
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
January
February
March
April
May
June
July
August
Septem...
October
Novem...
Decem...

Appendix A

Certificate of Analysis

Water Chemistry including: Physical, Chemical, Biological

Maxxam Job #: B531098
Report Date: 2015/05/12

Alberni Clayoquot Regional District
Client Project #: BEAVER CREEK WATER SYSTEM

TRIHALOMETHANES (THM) IN WATER

Maxxam ID		MB6511	MB6512		
Sampling Date		2015/04/16	2015/04/16		
COC Number		650100	650100		
	Units	BC STRICK ROAD PH	BC NORTH RESERVOIR	RDL	QC Batch
Volatiles					
Chloroform	ug/L	45	50	1.0	7870331
Chlorodibromomethane	ug/L	<1.0	<1.0	1.0	7870331
Bromodichloromethane	ug/L	2.6	2.7	1.0	7870331
Bromoform	ug/L	<1.0	<1.0	1.0	7870331
Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	101	101		7870331
4-Bromofluorobenzene (sur.)	%	102	102		7870331
D4-1,2-Dichloroethane (sur.)	%	101	102		7870331
RDL = Reportable Detection Limit					

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Maxxam Job #: B570426
Report Date: 2015/04/28

Maxxam Analytics
Client Project #: B531098

HALOACETIC ACIDS BY GC-ECD (WATER)

Maxxam ID		ADF841	ADF842		
Sampling Date		2015/04/16	2015/04/16		
COC Number		N/A	N/A		
	Units	MB6511-02R \ BC STRICK ROAD PH	MB6512-02R \ BC NORTH RESERVOIR	RDL	QC Batch
Monochloroacetic Acid (MCAA)	ug/L	<5.0	<5.0	5.0	3989979
Monobromoacetic Acid (MBAA)	ug/L	<5.0	<5.0	5.0	3989979
Dichloroacetic Acid (DCAA)	ug/L	13	27	5.0	3989979
Trichloroacetic Acid (TCAA)	ug/L	36	58	5.0	3989979
Bromochloroacetic Acid (BCAA)	ug/L	<5.0	<5.0	5.0	3989979
Dibromoacetic Acid (DBAA)	ug/L	<5.0	<5.0	5.0	3989979
Total haloacetic acids	ug/L	49	85	10	3989979
Surrogate Recovery (%)					
2,3-Dibromopropionic Acid	%	114	122		3989979

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B564614
Report Date: 2015/08/06

Alberni Clayoquot Regional District
Client Project #: BEAVER CREEK WATER SYSTEM

TRIHALOMETHANES (THM) IN WATER

Maxxam ID		MT7390		MT7391		
Sampling Date		2015/07/28		2015/07/28		
COC Number		320105		320105		
	Units	BC STRICK ROAD PH	RDL	BC NORTH RESERVOIR	RDL	QC Batch
Volatiles						
Chloroform	ug/L	21	1.0	26	1.0	7987655
Chlorodibromomethane	ug/L	<1.0	1.0	1.0	1.0	7987655
Bromodichloromethane	ug/L	<5.3 (1)	5.3	4.9	1.0	7987655
Bromoform	ug/L	<1.0	1.0	<1.0	1.0	7987655
Surrogate Recovery (%)						
1,4-Difluorobenzene (sur.)	%	101		101		7987655
4-Bromofluorobenzene (sur.)	%	98		95		7987655
D4-1,2-Dichloroethane (sur.)	%	104		93		7987655

RDL = Reportable Detection Limit
(1) Detection limits raised due to matrix interference.

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Maxxam Job #: B5F0504
Report Date: 2015/08/06

Maxxam Analytics
Client Project #: B564614

HALOACETIC ACIDS BY GC-ECD (WATER)

Maxxam ID		ASH395	ASH396		
Sampling Date		2015/07/28	2015/07/28		
COC Number		N/A	N/A		
	Units	MT7390-02R\BC STRICK ROAD PH	MT7391-02R\BC NORTH RESERVOIR	RDL	QC Batch
Monochloroacetic Acid (MCAA)	ug/L	<5.0	<5.0	5.0	4132077
Monobromoacetic Acid (MBAA)	ug/L	<5.0	<5.0	5.0	4132077
Dichloroacetic Acid (DCAA)	ug/L	5.3	9.6	5.0	4132077
Trichloroacetic Acid (TCAA)	ug/L	7.0	13	5.0	4132077
Bromochloroacetic Acid (BCAA)	ug/L	<5.0	<5.0	5.0	4132077
Dibromoacetic Acid (DBAA)	ug/L	<5.0	<5.0	5.0	4132077
Total haloacetic acids	ug/L	12	23	10	4132077
Surrogate Recovery (%)					
2,3-Dibromopropionic Acid	%	95	94		4132077

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B591018
Report Date: 2015/11/05

Alberni Clayoquot Regional District
Client Project #: BEAVER CREEK WATER SYSTEM

TRIHALOMETHANES (THM) IN WATER

Maxxam ID		NJ7237	NJ7238		
Sampling Date		2015/10/14	2015/10/14		
COC Number		320107	320107		
	UNITS	BC STRICK ROAD PH	BC NORTH RESERVOIR	RDL	QC Batch
Volatiles					
Chloroform	ug/L	50	48	1.0	8077271
Chlorodibromomethane	ug/L	<1.0	<1.0	1.0	8077271
Bromodichloromethane	ug/L	4.4	5.4	1.0	8077271
Bromoform	ug/L	<1.0	<1.0	1.0	8077271
Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	100	101		8077271
4-Bromofluorobenzene (sur.)	%	100	100		8077271
D4-1,2-Dichloroethane (sur.)	%	99	98		8077271
RDL = Reportable Detection Limit					

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Maxxam
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Maxxam Job #: B5L1827
Report Date: 2015/10/27

Maxxam Analytics
Client Project #: B591018

HALOACETIC ACIDS BY GC-ECD (WATER)

Maxxam ID		BEH900	BEH901		
Sampling Date		2015/10/14	2015/10/14		
COC Number		N/A	N/A		
	UNITS	NJ7237-02R\BC STRICK ROAD PH	NJ7238-02R\BC NORTH RESERVOIR	RDL	QC Batch
Monochloroacetic Acid (MCAA)	ug/L	<5.0	<5.0	5.0	4236130
Monobromoacetic Acid (MBAA)	ug/L	<5.0	<5.0	5.0	4236130
Dichloroacetic Acid (DCAA)	ug/L	11	<5.0	5.0	4236130
Trichloroacetic Acid (TCAA)	ug/L	31	33	5.0	4236130
Bromochloroacetic Acid (BCAA)	ug/L	<5.0	<5.0	5.0	4236130
Dibromoacetic Acid (DBAA)	ug/L	<5.0	<5.0	5.0	4236130
Total haloacetic acids	ug/L	42	33	10	4236130
Surrogate Recovery (%)					
2,3-Dibromopropionic Acid	%	86	95		4236130

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch

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Maxxam Job #: B5B0228
Report Date: 2016/01/05

Alberni Clayoquot Regional District
Client Project #: BEAVER CREEK WATER SYSTEM

TRIHALOMETHANES (THM) IN WATER

Maxxam ID		NV0350	NV0351		
Sampling Date		2015/12/10	2015/12/10		
COC Number		320108	320108		
	UNITS	BC STRICK ROAD PH	BC RESERVOIR #1	RDL	QC Batch
Volatiles					
Chloroform	ug/L	92	72	1.0	8143374
Chlorodibromomethane	ug/L	<1.0	<1.0	1.0	8143374
Bromodichloromethane	ug/L	4.3	4.0	1.0	8143374
Bromoform	ug/L	<1.0	<1.0	1.0	8143374
Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	105	105		8143374
4-Bromofluorobenzene (sur.)	%	96	96		8143374
D4-1,2-Dichloroethane (sur.)	%	109	110		8143374
RDL = Reportable Detection Limit					

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Maxxam Job #: B5P8654
Report Date: 2016/01/07

Maxxam Analytics
Client Project #: B5B0228

HALOACETIC ACIDS BY GC-ECD (DRINKING WATER)

Maxxam ID		BNN916	BNN917		
Sampling Date		2015/12/10	2015/12/10		
COC Number		N/A	N/A		
	Units	**NV0350-02R\ BC STRICK ROAD PH**	**NV0351-02R\ BC RESERVOIR**	**RDL**	**QC Batch**
Monochloroacetic Acid (MCAA)	ug/L	<5.0	<5.0	5.0	4330703
Monobromoacetic Acid (MBAA)	ug/L	<5.0	<5.0	5.0	4330703
Dichloroacetic Acid (DCAA)	ug/L	39	27	5.0	4330703
Trichloroacetic Acid (TCAA)	ug/L	86	60	5.0	4330703
Bromochloroacetic Acid (BCAA)	ug/L	<5.0	<5.0	5.0	4330703
Dibromoacetic Acid (DBAA)	ug/L	<5.0	<5.0	5.0	4330703
Total haloacetic acids	ug/L	120	87	5.0	4330703
Surrogate Recovery (%)					
2,3-Dibromopropionic Acid	%	80 (1)	85 (1)		4330703

N/A = Not Applicable
RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
(1) HAA sample analyzed past recommended hold time as per client request.

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

Lab Number: 117011
Date Reported: 30 Jan 15
Date Completed: 30 Jan 15
Date Received: 21 Jan 15 9:39

117011-01 Sugsaw Lk Existing Intake
Sampled By:
Sampling Date: 19 Jan 15 0:00

Test	Result	Units	Drinking Water Guideline
Colour - True	83.1	Col. Unit	15
Conductivity	28.1	uS/cm	
DOC - Dissolved Organic Carbon	4.74	mg/L	
Fecal Coliforms (MF)	1	CFU/100ml	
T-Iron	0.154	mg/L	0.3 AO
T-Manganese	0.0052	mg/L	0.05 AO
.	.		
Total Coliforms (DES)	109.1	MPN/100mL	<1
E. coli (DES)	<1.0	MPN/100mL	<1
Total Organic Carbon	5	mg/L	
Total Suspended Solids	<4.0	mg/L	
Turbidity	0.63	NTU	0.1 Operatonal Stand

117011-02 Sugsaw Lk Location # 1
Sampled By:
Sampling Date: 19 Jan 15 0:00

Test	Result	Units	Drinking Water Guideline
Colour - True	73.6	Col. Unit	15
Conductivity	28.2	uS/cm	
DOC - Dissolved Organic Carbon	5.03	mg/L	
Fecal Coliforms (MF)	<1	CFU/100ml	
T-Iron	0.124	mg/L	0.3 AO
T-Manganese	0.0047	mg/L	0.05 AO
.	.		

Test results are in the results column. Your results should be below or within the values listed in the Drinking Water guidelines column on the right hand side of the report. 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 change. Method uncertainties for specified analyses are available upon request.

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117011-02 Sugsaw Lk Location # 1

Sampled By:

Sampling Date: 19 Jan 15 0:00

Test	Result	Units	Drinking Water Guideline
Total Coliforms (DES)	62.7	MPN/100mL	<1
E. coli (DES)	<1.0	MPN/100mL	<1
Total Organic Carbon	4.99	mg/L	
Total Suspended Solids	<4.0	mg/L	
Turbidity	0.66	NTU	0.1 Operatonal Stand

117011-03 Sugsaw Lk Location # 2

Sampled By:

Sampling Date: 19 Jan 15 0:00

Test	Result	Units	Drinking Water Guideline
Colour - True	73.2	Col. Unit	15
Conductivity	28.4	uS/cm	
DOC - Dissolved Organic Carbon	4.75	mg/L	
Fecal Coliforms (MF)	<1	CFU/100ml	
T-Iron	0.148	mg/L	0.3 AO
T-Manganese	0.0049	mg/L	0.05 AO
.	.		
Total Coliforms (DES)	50.4	MPN/100mL	<1
E. coli (DES)	<1.0	MPN/100mL	<1
Total Organic Carbon	4.73	mg/L	
Total Suspended Solids	<4.0	mg/L	
Turbidity	0.47	NTU	0.1 Operatonal Stand

Test results are in the results column. Your results should be below or within the values listed in the Drinking Water guidelines column on the right hand side of the report. 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 change. Method uncertainties for specified analyses are available upon request.

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: 117010
Date Reported: 30 Jan 15
Date Completed: 30 Jan 15
Date Received: 21 Jan 15 9:34

117010-01 BWS Reservoir
Sampled By: John Thomas
Sampling Date: 19 Jan 15 0:00

Test	Result	Units	Drinking Water Guideline
Bromodichloromethane	5.4	ug/L	0.016 MAC
Bromoform	<1.0	ug/L	
Chloroform	280	ug/L	
Dibromochloromethane	<1.0	ug/L	

117010-01

Test	Method	Analyst	Date
Bromodichloromethane	Maxxam EPA 8260c R3 m	Maxx	1/26/2015
Bromoform	Maxxam EPA 8260c R3 m	Maxx	1/26/2015
Chloroform	Maxxam EPA 8260c R3 m	Maxx	1/26/2015
Dibromochloromethane	Maxxam EPA 8260c R3 m	Maxx	1/26/2015

Approved By: Catherine Black

Catherine Black, Owner/Operator

Test results are in the results column. Your results should be below or within the values listed in the Drinking Water guidelines column on the right hand side of the report. AO = Aesthetic Objective; MAC = Max. Allowable Concentration; IMAC = Interim MAC >= Greater than; < = Less than
Results relate only to samples as submitted. This certificate must not be reproduced, except in its entirety, without written consent from the laboratory.
Canadian Drinking Water Guidelines as listed on Dec. 5th, 2005 and are subject to change. Method uncertainties for specified analyses are available upon request.

BAMFIELD'S SOURCE WATER, MARCH 2015

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		LU6074	LU6075	LU6076		
Sampling Date		2015/03/02	2015/03/02	2015/03/02		
COC Number		525105	525105	525105		
	Units	SUGSAW LK. EXISTING INTAKE	SUGSAW LK. LOCATION #1	SUGSAW LK. LOCATION #2	RDL	QC Batch
Misc. Inorganics						
Dissolved Organic Carbon (C)	mg/L	3.84 (1)	3.74 (1)	3.76 (1)	0.50	7828270
Total Organic Carbon (C)	mg/L	4.88	4.80	4.61	0.50	7825881
MISCELLANEOUS						
True Colour	Col. Unit	65.5	62.3	62.3	5.0	7826559
Physical Properties						
Conductivity	uS/cm	27.0	28.0	27.4	1.0	7825697
pH	pH	6.81	6.76	6.78	N/A	7825696
Physical Properties						
Total Suspended Solids	mg/L	<4.0	<4.0	<4.0	4.0	7826541
Turbidity	NTU	1.02	0.32	0.37	0.10	7825217

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		LU6074	LU6075	LU6076		
Sampling Date		2015/03/02	2015/03/02	2015/03/02		
COC Number		525105	525105	525105		
	Units	SUGSAW LK. EXISTING INTAKE	SUGSAW LK. LOCATION #1	SUGSAW LK. LOCATION #2	RDL	QC Batch
Total Metals by ICPMS						
Total Iron (Fe)	ug/L	92	99	97	10	7825889
Total Magnesium (Mg)	ug/L	498	444	448	50	7825889
RDL = Reportable Detection Limit						

MICROBIOLOGY (WATER)

Maxxam ID		LU6074		LU6075		LU6076		
Sampling Date		2015/03/02		2015/03/02		2015/03/02		
COC Number		525105		525105		525105		
	Units	SUGSAW LK. EXISTING INTAKE	RDL	SUGSAW LK. LOCATION #1	RDL	SUGSAW LK. LOCATION #2	RDL	QC Batch
Microbiological Param.								
E. coli	CFU/100mL	<2	2	<1	1	<2	2	7825638
Fecal Coliforms	CFU/100mL	<2	2	<1	1	<2	2	7825636
Total Coliforms	CFU/100mL	38	2	11	1	22	2	7825639
RDL = Reportable Detection Limit								

TRIHALOMETHANES (THM) IN WATER

Maxxam ID		LU6077		
Sampling Date		2015/03/02		
COC Number		525105		
	Units	BWS RESERVOIR	RDL	QC Batch
Volatiles				
Chloroform	ug/L	300	1.0	7825777
Chlorodibromomethane	ug/L	<1.0	1.0	7825777
Bromodichloromethane	ug/L	5.9	1.0	7825777
Bromoform	ug/L	<1.0	1.0	7825777
Surrogate Recovery (%)				
1,4-Difluorobenzene (sur.)	%	103		7825777
4-Bromofluorobenzene (sur.)	%	89		7825777
D4-1,2-Dichloroethane (sur.)	%	97		7825777
RDL = Reportable Detection Limit				

Client/Code

Alberni Clayoquot Regional District
Attn: John Thomas
3008 Fifth Ave
Port Alberni, BC
V9Y 2E3

TEL: 250-720-2700
FAX:
john.thomas@acrd.bc.ca

Date 04Mar15 11:29a No. W118845
Source FWS
Type of Sample water
No. of Samples 3

Comments Arrival temp.: 4.0C
INV Please

Samples: Suasow Lake

PARASITE ANALYSIS

Sample	Cysts/100L	Organisms Identified	Comments
1 Existing Intake	ND	Giardia (cysts)	-protozoan; enteric parasite
03Mar15 100 Gallons	ND	Cryptosporidium (oocysts)	-protozoan: enteric parasite
2 Location #1	ND	Giardia (cysts)	-protozoan; enteric parasite
03Mar15 100 Gallons	ND	Cryptosporidium (oocysts)	-protozoan: enteric parasite
3 Location #2	ND	Giardia (cysts)	-protozoan; enteric parasite
03Mar15 100 Gallons	ND	Cryptosporidium (oocysts)	-protozoan: enteric parasite

Detection Limit = 1 per 100L *
Lab Test Recovery = 94.6%
* test is strongly influenced by volume collected, amount & type of sediment present

ND = none detected

ref: Direct Antibody -Hydrofluor Meridian
Monitoring for Giardia & Cryptosporidium, JL Clancy, WD Gollnitz & Z Tabib, 1994
Prop. ICR Protozoan Methods for Detection of Giardia Cysts and Cryptospordium Oocysts in Water by Fluorescent Antibody Procedures 1993
US EPA Consensus Method for Determing Groundwaters Under the Direct Influence of Surface Water Using Microscopic Particulate Analysis (MPA). Vasconcelos, J., S. Harris., 1992
Manual of Clinical Microbiology, EH Lennette etal. Am. Soc for Microbiology
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Veterinary Clinical Parastiology, MW Sloss, RL Kemp. Iowa State Univ. Press 5th ed.
Parasitology for Vetinarians. JR Georgi & ME Georgi. WB Saunders & Co, 1990
Personal Communications re methodologies & taxonomy: US EPA -S. Harris,
US EPA (Cinc) F. Schaefer
US EPA (retired) J.Vasconcelos
BC CDC Magda Moritz (1995)

K. Paneque Martinez
Microbiologist

W. Riggs
Sr. Microbiologist

BAMFIELD'S SOURCE WATER, APRIL 2015

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		MB6308	MB6309	MB6310		
Sampling Date		2015/04/15	2015/04/15	2015/04/15		
COC Number		525106	525106	525106		
	Units	SUGSAW LK. EXISTING INTAKE	SUGSAW LK. LOCATION #1	SUGSAW LK. LOCATION #2	RDL	QC Batch
Misc. Inorganics						
Dissolved Organic Carbon (C)	mg/L	3.31	2.72	2.78	0.50	7872517
Total Organic Carbon (C)	mg/L	3.61	4.19	4.15	0.50	7872518
MISCELLANEOUS						
True Colour	Col. Unit	72.0	75.0	70.2	5.0	7867517
Physical Properties						
Conductivity	uS/cm	25.0	26.4	26.2	1.0	7868749
pH	pH	6.91	7.01	6.91	N/A	7868748
Physical Properties						
Total Suspended Solids	mg/L	<4.0	<4.0	<4.0	4.0	7877011
Turbidity	NTU	0.61	0.50	0.50	0.10	7869172

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		MB6308	MB6309	MB6310		
Sampling Date		2015/04/15	2015/04/15	2015/04/15		
COC Number		525106	525106	525106		
	Units	SUGSAW LK. EXISTING INTAKE	SUGSAW LK. LOCATION #1	SUGSAW LK. LOCATION #2	RDL	QC Batch
Total Metals by ICPMS						
Total Iron (Fe)	ug/L	96	116	122	10	7868448
Total Manganese (Mn)	ug/L	2.5	3.6	3.9	1.0	7868448
RDL = Reportable Detection Limit						

MICROBIOLOGY (WATER)

Maxxam ID		MB6308	MB6309	MB6310		
Sampling Date		2015/04/15	2015/04/15	2015/04/15		
COC Number		525106	525106	525106		
	Units	SUGSAW LK. EXISTING INTAKE	SUGSAW LK. LOCATION #1	SUGSAW LK. LOCATION #2	RDL	QC Batch
Microbiological Param.						
E. coli	CFU/100mL	<1	<1	<1	1	7868604
Fecal Coliforms	CFU/100mL	<1	<1	<1	1	7868591
Total Coliforms	CFU/100mL	47	28	16	1	7868588
RDL = Reportable Detection Limit						

TRIHALOMETHANES (THM) IN WATER

Maxxam ID		MB6311		
Sampling Date		2015/04/15		
COC Number		525106		
	Units	BWS RESERVOIR	RDL	QC Batch
Volatiles				
Chloroform	ug/L	240	1.0	7870331
Chlorodibromomethane	ug/L	<1.0	1.0	7870331
Bromodichloromethane	ug/L	6.6	1.0	7870331
Bromoform	ug/L	<1.0	1.0	7870331
Surrogate Recovery (%)				
1,4-Difluorobenzene (sur.)	%	101		7870331
4-Bromofluorobenzene (sur.)	%	102		7870331
D4-1,2-Dichloroethane (sur.)	%	101		7870331
RDL = Reportable Detection Limit				

BAMFIELD'S SOURCE WATER, MAY 2015

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Maxxam ID		MH0821		MH0822		MH0823		
Sampling Date		2015/05/19		2015/05/19		2015/05/19		
COC Number		525109		525109		525109		
	Units	SUGSAW LK. EXISTING INTAKE	QC Batch	SUGSAW LK. LOCATION #1	QC Batch	SUGSAW LK. LOCATION #2	RDL	QC Batch
Misc. Inorganics								
Dissolved Organic Carbon (C)	mg/L	3.63	7913215	3.47	7913216	3.99	0.50	7913215
Total Organic Carbon (C)	mg/L	4.07	7914268	3.54	7913222	3.75	0.50	7914268
MISCELLANEOUS								
True Colour	Col. Unit	57.9	7910836	66.8	7910836	61.4	5.0	7910836
Physical Properties								
Conductivity	uS/cm	28.4	7909454	27.0	7909454	28.0	1.0	7909454
pH	pH	7.14	7909451	6.94	7909451	7.41	N/A	7909451
Physical Properties								
Total Suspended Solids	mg/L	<4.0	7910238	<4.0	7910238	<4.0	4.0	7910238
Turbidity	NTU	0.59	7909681	0.36	7909681	0.41	0.10	7909681

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Maxxam ID		MH0821	MH0822	MH0823		
Sampling Date		2015/05/19	2015/05/19	2015/05/19		
COC Number		525109	525109	525109		
	Units	SUGSAW LK. EXISTING INTAKE	SUGSAW LK. LOCATION #1	SUGSAW LK. LOCATION #2	RDL	QC Batch
Total Metals by ICPMS						
Total Iron (Fe)	ug/L	79	86	80	10	7909969
Total Manganese (Mn)	ug/L	2.7	3.9	3.9	1.0	7909969
RDL = Reportable Detection Limit						

MICROBIOLOGY (DRINKING WATER)

Maxxam ID		MH0821	MH0822	MH0823		
Sampling Date		2015/05/19	2015/05/19	2015/05/19		
COC Number		525109	525109	525109		
	Units	SUGSAW LK. EXISTING INTAKE	SUGSAW LK. LOCATION #1	SUGSAW LK. LOCATION #2	RDL	QC Batch
Microbiological Param.						
E. coli	CFU/100mL	<1	<1	<1	1	7908813
Total Coliforms	CFU/100mL	230	87	160	1	7908813
MICROBIOLOGY						
Fecal Coliforms	CFU/100mL	<1	<1	<1	1	7908814
RDL = Reportable Detection Limit						

TRIHALOMETHANES (THM) IN WATER

Maxxam ID		MH0824		
Sampling Date		2015/05/19		
COC Number		525109		
	Units	BWS RESERVOIR	RDL	QC Batch
Volatiles				
Chloroform	ug/L	280	1.0	7909808
Chlorodibromomethane	ug/L	<1.0	1.0	7909808
Bromodichloromethane	ug/L	7.6	1.0	7909808
Bromoform	ug/L	<1.0	1.0	7909808
Surrogate Recovery (%)				
1,4-Difluorobenzene (sur.)	%	101		7909808
4-Bromofluorobenzene (sur.)	%	102		7909808
D4-1,2-Dichloroethane (sur.)	%	106		7909808
RDL = Reportable Detection Limit				

BAMFIELD'S SOURCE WATER, AUGUST 2015

ELEMENTS BY ATOMIC SPECTROSCOPY (DRINKING WATER)

Maxxam ID			MZ7428	MZ7429		MZ7430		
Sampling Date			2015/08/26	2015/08/26		2015/08/26		
COC Number			525110	525110		525110		
	UNITS	AO	SUGAW LK EXISTING INTAKE	SUGAW LK LOCATION #1	QC Batch	SUGAW LK LOCATION #2	RDL	QC Batch
Total Metals by ICPMS								
Total Iron (Fe)	ug/L	300	101	74	8019948	27	10	8022424
Total Manganese (Mn)	ug/L	50	11.9	10.4	8019948	2.1	1.0	8022424
RDL = Reportable Detection Limit								

MICROBIOLOGY (DRINKING WATER)

Maxxam ID			MZ7428	MZ7429	MZ7430		
Sampling Date			2015/08/26	2015/08/26	2015/08/26		
COC Number			525110	525110	525110		
	UNITS	MAC	SUGAW LK EXISTING INTAKE	SUGAW LK LOCATION #1	SUGAW LK LOCATION #2	RDL	QC Batch
Microbiological Param.							
E. coli	CFU/100mL	<1	<1	<1	<1	1	8020088
Total Coliforms	CFU/100mL	<1	290	130	200	1	8020088
MICROBIOLOGY							
Fecal Coliforms	CFU/100mL	-	<1	<1	<1	1	8020085
RDL = Reportable Detection Limit							

TRIHALOMETHANES (THM) IN WATER

Maxxam ID			MZ7431		
Sampling Date			2015/08/26		
COC Number			525110		
	UNITS	MAC	BWS RESERVOIR	RDL	QC Batch
Volatiles					
Chloroform	ug/L	-	180	1.0	8022087
Chlorodibromomethane	ug/L	-	<1.0	1.0	8022087
Bromodichloromethane	ug/L	16	11	1.0	8022087
Bromoform	ug/L	-	<1.0	1.0	8022087
Surrogate Recovery (%)					
1,4-Difluorobenzene (sur.)	%	-	99		8022087
4-Bromofluorobenzene (sur.)	%	-	98		8022087
D4-1,2-Dichloroethane (sur.)	%	-	113		8022087
RDL = Reportable Detection Limit					

Maxxam
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Success Through Science®

Maxxam Job #: B574677
Report Date: 2015/09/03

Alberni Clayoquot Regional District
Client Project #: BAMFIELD WATER SYSTEM
Site Location: SUGSAW LAKE

RESULTS OF CHEMICAL ANALYSES OF DRINKING WATER

Maxxam ID					MZ7428	MZ7429		
Sampling Date					2015/08/26	2015/08/26		
COC Number					525110	525110		
	UNITS	MAC	AO	OG	SUGAW LK EXISTING INTAKE	SUGAW LK LOCATION #1	RDL	QC Batch
Misc. Inorganics								
Dissolved Organic Carbon (C)	mg/L	-	-	-	3.1	2.9 (1)	0.50	8024083
Total Organic Carbon (C)	mg/L	-	-	-	3.4	2.8	0.50	8024095
MISCELLANEOUS								
True Colour	Col. Unit	-	15	-	57.8	62.2	5.0	8021068
Physical Properties								
Conductivity	uS/cm	-	-	-	27.4	27.1	1.0	8020012
pH	pH	-	6.5:8.5	-	6.69	6.79	N/A	8020013
Physical Properties								
Total Suspended Solids	mg/L	-	-	-	<4.0	<4.0	4.0	8023391
Turbidity	NTU	see remark	see remark	see remark	0.37	0.33	0.10	8019678

RDL = Reportable Detection Limit
N/A = Not Applicable
(1) Dissolved greater than total. Results within acceptable limits of precision.

Maxxam ID					MZ7430		
Sampling Date					2015/08/26		
COC Number					525110		
	UNITS	MAC	AO	OG	SUGAW LK LOCATION #2	RDL	QC Batch
Misc. Inorganics							
Dissolved Organic Carbon (C)	mg/L	-	-	-	2.6	0.50	8024083
Total Organic Carbon (C)	mg/L	-	-	-	2.8	0.50	8024095
MISCELLANEOUS							
True Colour	Col. Unit	-	15	-	32.6	5.0	8021068
Physical Properties							
Conductivity	uS/cm	-	-	-	30.4	1.0	8020012
pH	pH	-	6.5:8.5	-	7.00	N/A	8020013
Physical Properties							
Total Suspended Solids	mg/L	-	-	-	<4.0	4.0	8023391
Turbidity	NTU	see remark	see remark	see remark	0.49	0.10	8019678

RDL = Reportable Detection Limit
N/A = Not Applicable

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

BAMFIELD'S SOURCE WATER, DECEMBER 2015

RESULTS OF CHEMICAL ANALYSES OF WATER

Maxxam ID		NV0283	NV0284	NV0285		
Sampling Date						
COC Number		481197-01-01	481197-01-01	481197-01-01		
	UNITS	SUGSAW LK EXISTING INTAKE	SUGSAW LK LOCATION #1	SUGSAW LK LOCATION #2	RDL	QC Batch
Misc. Inorganics						
Dissolved Organic Carbon (C)	mg/L	4.02	3.84	3.87	0.50	8142136
Total Organic Carbon (C)	mg/L	4.53	4.40	4.39	0.50	8143725
MISCELLANEOUS						
True Colour	Col. Unit	71.1	70.1	69.9	5.0	8142062
Physical Properties						
Conductivity	uS/cm	25.6	25.4	25.6	1.0	8142370
pH	pH	6.75	6.74	6.76	N/A	8142367
Physical Properties						
Total Suspended Solids	mg/L	<4.0	<4.0	<4.0	4.0	8144954

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID		NV0283	NV0284		NV0285		
Sampling Date							
COC Number		481197-01-01	481197-01-01		481197-01-01		
	UNITS	SUGSAW LK EXISTING INTAKE	SUGSAW LK LOCATION #1	QC Batch	SUGSAW LK LOCATION #2	RDL	QC Batch
Total Metals by ICPMS							
Total Iron (Fe)	ug/L	216	220	8141908	175	10	8142267
Total Manganese (Mn)	ug/L	44.2	41.5	8141908	37.6	1.0	8142267
RDL = Reportable Detection Limit							

MICROBIOLOGY (WATER)

Maxxam ID		NV0283	NV0284	NV0285		
Sampling Date						
COC Number		481197-01-01	481197-01-01	481197-01-01		
	UNITS	SUGSAW LK EXISTING INTAKE	SUGSAW LK LOCATION #1	SUGSAW LK LOCATION #2	RDL	QC Batch
Microbiological Param.						
E. coli	CFU/100mL	4	<2	<2	2	8141800
Fecal Coliforms	CFU/100mL	4	<2	<2	2	8141797
Total Coliforms	CFU/100mL	110	86	88	2	8141798
RDL = Reportable Detection Limit						

TRIHALOMETHANES (THM) IN WATER

Maxxam ID		NV0286		
Sampling Date				
COC Number		481197-01-01		
	UNITS	BWS RESEVOIR	RDL	QC Batch
Volatiles				
Chloroform	ug/L	250	1.0	8143374
Chlorodibromomethane	ug/L	<1.0	1.0	8143374
Bromodichloromethane	ug/L	6.9	1.0	8143374
Bromoform	ug/L	<1.0	1.0	8143374
Surrogate Recovery (%)				
1,4-Difluorobenzene (sur.)	%	105		8143374
4-Bromofluorobenzene (sur.)	%	96		8143374
D4-1,2-Dichloroethane (sur.)	%	109		8143374
RDL = Reportable Detection Limit				

Maxxam Job #: B5B1355
Report Date: 2015/12/22

Alberni Clayoquot Regional District
Client Project #: LONG BEACH AIRPORT WATER SYSTE

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Maxxam ID			NV7820		NV7821		
Sampling Date			2015/12/15		2015/12/15		
COC Number			330108		330108		
	UNITS	AO	RAW WATER	QC Batch	FILTERED	RDL	QC Batch
Total Metals by ICPMS							
Total Iron (Fe)	ug/L	300	5310	8148217	15	10	8148822
Total Manganese (Mn)	ug/L	50	424	8148217	<1.0	1.0	8148822
Total Sodium (Na)	ug/L	200000	12100	8148217	69900	50	8148822
RDL = Reportable Detection Limit							

Maxxam Analytics International Corporation o/a Maxxam Analytics Burnaby: 4606 Canada Way V5G 1K5 Telephone(604) 734-7276 Fax(604) 731-2386

Appendix B

Facility Microbiological Sampling History

Total Coliforms & E.Coli

Water Sample Range Report

Island Health

Facility Name: PORT ALBERNI WATER WORKS
Facility Type: DWT
Date Range: Jan 1 2015 to Dec 31 2015
Date Created: Jan 06 2016

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
Cougar Smith Park, Cougar Smith Park - Faber Road, Dist. site, Monthly				
	27-Jan-2015	L1	L1	
	11-Feb-2015	L1	L1	
	23-Mar-2015	L1	L1	
	29-Apr-2015	L1	L1	
	11-May-2015	L1	L1	
	22-Jun-2015	L1	L1	
	27-Jul-2015	L1	L1	
	21-Sep-2015	L1	L1	
	19-Oct-2015	L1	L1	
	23-Nov-2015	L1	L1	
	14-Dec-2015	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

MILLSTREAM COMMUNITY WATER SYSTEM

Facility Location:
3008 Fifth Street
Port Alberni

Facility Information:
Facility Type: DWC

Facility Sampling History:

Location	Date	Total Coliform	E. Coli
John Gouweleeuw's Residence	15-Dec-2015	L1	L1
McConnell Residence, 262 Karn Avenue	15-Dec-2015	L1	L1
John Gouweleeuw's Residence	25-Nov-2015	L1	L1
McConnell Residence, 262 Karn Avenue	25-Nov-2015	L1	L1
John Gouweleeuw's Residence	14-Oct-2015	L1	L1
McConnell Residence, 262 Karn Avenue	14-Oct-2015	L1	L1
John Gouweleeuw's Residence	16-Sep-2015	L1	L1
McConnell Residence, 262 Karn Avenue	16-Sep-2015	L1	L1
John Gouweleeuw's Residence	19-Aug-2015	L1	L1
McConnell Residence, 262 Karn Avenue	19-Aug-2015	L1	L1
John Gouweleeuw's Residence	22-Jul-2015	L1	L1
McConnell Residence, 262 Karn Avenue	22-Jul-2015	L1	L1
John Gouweleeuw's Residence	16-Jun-2015	L1	L1
McConnell Residence, 262 Karn Avenue	16-Jun-2015	L1	L1
John Gouweleeuw's Residence	20-May-2015	L1	L1
McConnell Residence, 262 Karn Avenue	20-May-2015	L1	L1
John Gouweleeuw's Residence	14-Apr-2015	L1	L1
McConnell Residence, 262 Karn Avenue	14-Apr-2015	L1	L1
John Gouweleeuw's Residence	16-Mar-2015	L1	L1
McConnell Residence, 262 Karn Avenue	16-Mar-2015	L1	L1
John Gouweleeuw's Residence	24-Feb-2015	L1	L1
McConnell Residence, 262 Karn Avenue	24-Feb-2015	L1	L1
AUDIT - Daley Residence Hose Bib, 2355 Ucluelet & Tofino Highway	21-Jan-2015	L1	L1
John Gouweleeuw's Residence	21-Jan-2015	L1	L1
McConnell Residence, 262 Karn Avenue	21-Jan-2015	L1	L1
John Gouweleeuw's Residence	10-Dec-2014	L1	L1
McConnell Residence, 262 Karn Avenue	10-Dec-2014	L1	L1
John Gouweleeuw's Residence	17-Nov-2014	L1	L1
McConnell Residence, 262 Karn Avenue	17-Nov-2014	L1	L1

TOFINO AIRPORT WATER SYSTEM

Facility Location:
3008 5th Avenue
Port Alberni

Facility Information:
Facility Type: DWC

Facility Sampling History:

Location	Date	Total Coliform	E. Coli
Pumphouse/Estowista	15-Dec-2015	L1	L1
Reservoir/pumphouse	15-Dec-2015	L1	L1
Terminal Building , Tofino Airport	15-Dec-2015	L1	L1
Pumphouse/Estowista	25-Nov-2015	L1	L1
Reservoir/pumphouse	25-Nov-2015	L1	L1
Terminal Building , Tofino Airport	25-Nov-2015	L1	L1
Pumphouse/Estowista	14-Oct-2015	L1	L1
Reservoir/pumphouse	14-Oct-2015	L1	L1
Terminal Building , Tofino Airport	14-Oct-2015	L1	L1
Pumphouse/Estowista	16-Sep-2015	L1	L1
Reservoir/pumphouse	16-Sep-2015	L1	L1
Terminal Building , Tofino Airport	16-Sep-2015	L1	L1
Pumphouse/Estowista	19-Aug-2015	L1	L1
Reservoir/pumphouse	19-Aug-2015	L1	L1
Terminal Building , Tofino Airport	19-Aug-2015	L1	L1
Pumphouse/Estowista	22-Jul-2015	L1	L1
Reservoir/pumphouse	22-Jul-2015	L1	L1
Terminal Building , Tofino Airport	22-Jul-2015	L1	L1
Pumphouse/Estowista	16-Jun-2015	L1	L1
Reservoir/pumphouse	16-Jun-2015	L1	L1
Terminal Building , Tofino Airport	16-Jun-2015	L1	L1
Pumphouse/Estowista	20-May-2015	L1	L1
Reservoir/pumphouse	20-May-2015	L1	L1
Terminal Building , Tofino Airport	20-May-2015	L1	L1
Pumphouse/Estowista	21-Apr-2015	L1	L1
Reservoir/pumphouse	21-Apr-2015	L1	L1
Terminal Building , Tofino Airport	21-Apr-2015	L1	L1
Pumphouse/Estowista	16-Mar-2015	L1	L1
Reservoir/pumphouse	16-Mar-2015	L1	L1
Terminal Building , Tofino Airport	16-Mar-2015	L1	L1

Pumphouse/Estowista	24-Feb-2015	L1	L1
Reservoir/pumphouse	24-Feb-2015	L1	L1
Terminal Building , Tofino Airport	24-Feb-2015	L1	L1
Pumphouse/Estowista	21-Jan-2015	L1	L1
Reservoir/pumphouse	21-Jan-2015	L1	L1
Terminal Building , Tofino Airport	21-Jan-2015	L1	L1
Pumphouse/Estowista	10-Dec-2014	L1	L1
Reservoir/pumphouse	10-Dec-2014	L1	L1
Terminal Building , Tofino Airport	10-Dec-2014	L1	L1
Pumphouse/Estowista	17-Nov-2014	L1	L1

Show: 40 results per page

NEXT

ALBERNI VALLEY AIRPORT

Facility Location:
7500 AIRPORT Road
Port Alberni

Facility Information:
Facility Type: DWS

Facility Sampling History:

Location	Date	Total Coliform	E. Coli
Alberni Valley Airport, Airport	14-Dec-2015	L1	L1
Alberni Valley Airport, Airport	23-Nov-2015	L1	L1
Alberni Valley Airport, Airport	19-Oct-2015	L1	L1
Alberni Valley Airport, Airport	21-Sep-2015	L1	L1
Alberni Valley Airport, Airport	24-Aug-2015	L1	L1
Alberni Valley Airport, Airport	27-Jul-2015	L1	L1
Alberni Valley Airport, Airport	22-Jun-2015	L1	L1
Alberni Valley Airport, Airport	11-May-2015	L1	L1
Alberni Valley Airport, Airport	29-Apr-2015	L1	L1
Alberni Valley Airport, Airport	23-Mar-2015	L1	L1
Alberni Valley Airport, Airport	11-Feb-2015	L1	L1
Alberni Valley Airport, Airport	13-Jan-2015	L1	L1
Alberni Valley Airport, Airport	16-Dec-2014	L1	L1
Alberni Valley Airport, Airport	26-Nov-2014	L1	L1
Alberni Valley Airport, Airport	20-Oct-2014	L1	L1
Alberni Valley Airport, Airport	15-Sep-2014	L1	L1
Alberni Valley Airport, Airport	20-Aug-2014	L1	L1
Alberni Valley Airport, Airport	14-Jul-2014	L1	L1
Alberni Valley Airport, Airport	9-Jun-2014	L1	L1
Alberni Valley Airport, Airport	26-May-2014	L1	L1

Show: 20 results per page

NEXT

BAMFIELD COMMUNITY WWS

Facility Location:
3008 Fifth Avenue
Bamfield

Facility Information:
Facility Type: DWC

Facility Sampling History:

Location	Date	Total Coliform	E. Coli
Bamfield Marine Station, Bamfield	2-Dec-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	2-Dec-2015	L1	L1
Butler Residence, Bamfield	2-Dec-2015	L1	L1
Canadian Coast Guard Post, Bamfield	2-Dec-2015	L1	L1
Pump House Grappler Rd, Bamfield	2-Dec-2015	L1	L1
Bamfield Marine Station, Bamfield	9-Nov-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	9-Nov-2015	L1	L1
Butler Residence, Bamfield	9-Nov-2015	L1	L1
Canadian Coast Guard Post, Bamfield	9-Nov-2015	L1	L1
Pump House Grappler Rd, Bamfield	9-Nov-2015	L1	L1
Bamfield Marine Station, Bamfield	6-Oct-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	6-Oct-2015	L1	L1
Butler Residence, Bamfield	6-Oct-2015	2	L1
Canadian Coast Guard Post, Bamfield	6-Oct-2015	L1	L1
Pump House Grappler Rd, Bamfield	6-Oct-2015	L1	L1
Bamfield Marine Station, Bamfield	1-Sep-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	1-Sep-2015	L1	L1
Butler Residence, Bamfield	1-Sep-2015	L1	L1
Canadian Coast Guard Post, Bamfield	1-Sep-2015	L1	L1
Pump House Grappler Rd, Bamfield	1-Sep-2015	L1	L1
Bamfield Marine Station, Bamfield	10-Aug-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	10-Aug-2015	L1	L1
Butler Residence, Bamfield	10-Aug-2015	L1	L1
Canadian Coast Guard Post, Bamfield	10-Aug-2015	L1	L1
Pump House Grappler Rd, Bamfield	10-Aug-2015	L1	L1
Bamfield Marine Station, Bamfield	13-Jul-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	13-Jul-2015	L1	L1
Butler Residence, Bamfield	13-Jul-2015	L1	L1
Canadian Coast Guard Post, Bamfield	13-Jul-2015	L1	L1
Pump House Grappler Rd, Bamfield	13-Jul-2015	L1	L1

Bamfield Marine Station, Bamfield	10-Jun-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	10-Jun-2015	L1	L1
Butler Residence, Bamfield	10-Jun-2015	L1	L1
Canadian Coast Guard Post, Bamfield	10-Jun-2015	L1	L1
Pump House Grappler Rd, Bamfield	10-Jun-2015	L1	L1
Bamfield Marine Station, Bamfield	6-May-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	6-May-2015	L1	L1
Butler Residence, Bamfield	6-May-2015	L1	L1
Canadian Coast Guard Post, Bamfield	6-May-2015	L1	L1
Pump House Grappler Rd, Bamfield	6-May-2015	L1	L1
Bamfield Marine Station, Bamfield	13-Apr-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	13-Apr-2015	L1	L1
Butler Residence, Bamfield	13-Apr-2015	L1	L1
Canadian Coast Guard Post, Bamfield	13-Apr-2015	L1	L1
Pump House Grappler Rd, Bamfield	13-Apr-2015	L1	L1
Bamfield Marine Station, Bamfield	10-Mar-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	10-Mar-2015	L1	L1
Butler Residence, Bamfield	10-Mar-2015	L1	L1
CANADIAN COAST GUARD POST, Bamfield	10-Mar-2015	L1	L1
Pump House Grappler Rd, Bamfield	10-Mar-2015	L1	L1
Bamfield Marine Station, Bamfield	10-Feb-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	10-Feb-2015	L1	L1
Butler Residence, Bamfield	10-Feb-2015	L1	L1
Canadian Coast Guard Post, Bamfield	10-Feb-2015	L1	L1
Pump House Grappler Rd, Bamfield	10-Feb-2015	L1	L1
Bamfield Marine Station, Bamfield	5-Jan-2015	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	5-Jan-2015	L1	L1
Butler Residence, Bamfield	5-Jan-2015	L1	L1
Canadian Coast Guard Post, Bamfield	5-Jan-2015	L1	L1
Pump House Grappler Rd, Bamfield	5-Jan-2015	L1	L1
Bamfield Marine Station, Bamfield	3-Dec-2014	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	3-Dec-2014	L1	L1
Butler Residence, Bamfield	3-Dec-2014	L1	L1
Canadian Coast Guard Post, Bamfield	3-Dec-2014	L1	L1
Pump House Grappler Rd, Bamfield	3-Dec-2014	L1	L1
Butler Residence, Bamfield	18-Nov-2014	L1	L1
Canadian Coast Guard Post, Bamfield	18-Nov-2014	L1	L1
Bamfield Marine Station, Bamfield	12-Nov-2014	L1	L1
Binnacle Road Reservoir, Binnacle Road -Bamfield	12-Nov-2014	L1	L1
Butler Residence, Bamfield	12-Nov-2014	L1	L1

BEAVER CREEK WATER SYSTEM

Facility Location:
3008 5th Avenue
Port Alberni

Facility Information:
Facility Type: DWT

Facility Sampling History:

Location	Date	Total Coliform	E. Coli
Gill School Hydrant, 5520 Beaver Creek Road	16-Dec-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	16-Dec-2015	L1	L1
Strick Road Pumphouse	16-Dec-2015	L1	L1
Swanson Road, 7000 Swanson Road	16-Dec-2015	L1	L1
Thompson Road, 7271 Thompson Road	16-Dec-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	8-Dec-2015	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	8-Dec-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	8-Dec-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	8-Dec-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	8-Dec-2015	L1	L1
5535 Maple Road, 5535 Maple Road	1-Dec-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	1-Dec-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	1-Dec-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	1-Dec-2015	L1	L1
Strick Road Pumphouse	1-Dec-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	25-Nov-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	25-Nov-2015	L1	L1
Springfield Road, 6287 Springfield Road	25-Nov-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	18-Nov-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	18-Nov-2015	L1	L1
Strick Road Pumphouse	18-Nov-2015	L1	L1
Swanson Road, 7000 Swanson Road	18-Nov-2015	L1	L1
Thompson Road, 7271 Thompson Road	18-Nov-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	17-Nov-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	17-Nov-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	9-Nov-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	9-Nov-2015	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	9-Nov-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	9-Nov-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	9-Nov-2015	L1	L1

North Reservoir, 7656 Beaver Creek Road	3-Nov-2015	L1	L1
5535 Maple Road, 5535 Maple Road	3-Nov-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	3-Nov-2015	L1	L1
Strick Road Pumphouse	3-Nov-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	27-Oct-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	27-Oct-2015	L1	L1
Springfield Road, 6287 Springfield Road	27-Oct-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	21-Oct-2015	L1	L1
Kitsuksis Reservior #1	21-Oct-2015	L1	L1
Strick Road Pumphouse	21-Oct-2015	L1	L1
Swanson Road, 7000 Swanson Road	21-Oct-2015	L1	L1
Thompson Road, 7271 Thompson Road	21-Oct-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	14-Oct-2015	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	14-Oct-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	14-Oct-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	14-Oct-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	14-Oct-2015	L1	L1
5535 Maple Road, 5535 Maple Road	6-Oct-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	6-Oct-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	6-Oct-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	6-Oct-2015	L1	L1
Strick Road Pumphouse	6-Oct-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	29-Sep-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	29-Sep-2015	L1	L1
Strick Road Pumphouse	29-Sep-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	22-Sep-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	22-Sep-2015	L1	L1
Springfield Road, 6287 Springfield Road	22-Sep-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	15-Sep-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	15-Sep-2015	L1	L1
Strick Road Pumphouse	15-Sep-2015	L1	L1
Swanson Road, 7000 Swanson Road	15-Sep-2015	L1	L1
Thompson Road, 7271 Thompson Road	15-Sep-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	8-Sep-2015	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	8-Sep-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	8-Sep-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	8-Sep-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	8-Sep-2015	L1	L1
5535 Maple Road, 5535 Maple Road	1-Sep-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	1-Sep-2015	L1	L1

Kitsuksis Road, 6000 Kitsuksis Road	1-Sep-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	1-Sep-2015	L1	L1
Strick Road Pumphouse	1-Sep-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	25-Aug-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	25-Aug-2015	L1	L1
Springfield Road, 6287 Springfield Road	25-Aug-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	18-Aug-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	18-Aug-2015	L1	L1
Strick Road Pumphouse	18-Aug-2015	L1	L1
Swanson Road, 7000 Swanson Road	18-Aug-2015	L1	L1
Thompson Road, 7271 Thompson Road	18-Aug-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	11-Aug-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	11-Aug-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	11-Aug-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	11-Aug-2015	L1	L1
5535 Maple Road, 5535 Maple Road	4-Aug-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	4-Aug-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	4-Aug-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	4-Aug-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	28-Jul-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	28-Jul-2015	L1	L1
Springfield Road, 6287 Springfield Road	28-Jul-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	21-Jul-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	21-Jul-2015	L1	L1
Strick Road Pumphouse	21-Jul-2015	L1	L1
Swanson Road, 7000 Swanson Road	21-Jul-2015	L1	L1
Thompson Road, 7271 Thompson Road	21-Jul-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	15-Jul-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	14-Jul-2015	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	14-Jul-2015	L1	L1

Show: 100 results per page

NEXT

BEAVER CREEK WATER SYSTEM

Facility Location:
3008 5th Avenue
Port Alberni

Facility Information:
Facility Type: DWT

Facility Sampling History:

Location	Date	Total Coliform	E. Coli
Dashwood Road, 7296 Dashwood Road	14-Jul-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	14-Jul-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	8-Jul-2015	L1	L1
5535 Maple Road, 5535 Maple Road	7-Jul-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	7-Jul-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	7-Jul-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	7-Jul-2015	L1	L1
Strick Road Pumphouse	7-Jul-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	30-Jun-2015	T	
Kitsuksis Road, 6000 Kitsuksis Road	30-Jun-2015	T	
Springfield Road, 6287 Springfield Road	30-Jun-2015	T	
6038 Beaver Creek Road, Bathroom - new shop	23-Jun-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	23-Jun-2015	L1	L1
Springfield Road, 6287 Springfield Road	23-Jun-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	17-Jun-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	17-Jun-2015	L1	L1
Strick Road Pumphouse	17-Jun-2015	L1	L1
Swanson Road, 7000 Swanson Road	17-Jun-2015	L1	L1
Thompson Road, 7271 Thompson Road	17-Jun-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	10-Jun-2015	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	10-Jun-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	10-Jun-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	10-Jun-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	10-Jun-2015	L1	L1
5535 Maple Road, 5535 Maple Road	2-Jun-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	2-Jun-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	2-Jun-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	2-Jun-2015	L1	L1
Strick Road Pumphouse	2-Jun-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	26-May-2015	L1	L1

Kitsuksis Road, 6000 Kitsuksis Road	26-May-2015	L1	L1
Springfield Road, 6287 Springfield Road	26-May-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	20-May-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	20-May-2015	L1	L1
Strick Road Pumphouse	20-May-2015	L1	L1
Swanson Road, 7000 Swanson Road	20-May-2015	L1	L1
Thompson Road, 7271 Thompson Road	20-May-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	12-May-2015	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	12-May-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	12-May-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	12-May-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	12-May-2015	L1	L1
5535 Maple Road, 5535 Maple Road	6-May-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	6-May-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	6-May-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	6-May-2015	L1	L1
Strick Road Pumphouse	6-May-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	28-Apr-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	28-Apr-2015	L1	L1
Springfield Road, 6287 Springfield Road	28-Apr-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	21-Apr-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	21-Apr-2015	L1	L1
Strick Road Pumphouse	21-Apr-2015	L1	L1
Swanson Road, 7000 Swanson Road	21-Apr-2015	L1	L1
Thompson Road, 7271 Thompson Road	21-Apr-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	13-Apr-2015	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	13-Apr-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	13-Apr-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	13-Apr-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	13-Apr-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	8-Apr-2015	L1	L1
Strick Road Pumphouse	8-Apr-2015	L1	L1
5535 Maple Road, 5535 Maple Road	7-Apr-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	7-Apr-2015	L1	L1
5535 Maple Road, 5535 Maple Road	31-Mar-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	31-Mar-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	31-Mar-2015	L1	L1
Strick Road Pumphouse	31-Mar-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	24-Mar-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	24-Mar-2015	L1	L1

Springfield Road, 6287 Springfield Road	24-Mar-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	16-Mar-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	16-Mar-2015	L1	L1
Strick Road Pumphouse	16-Mar-2015	L1	L1
Swanson Road, 7000 Swanson Road	16-Mar-2015	L1	L1
Thompson Road, 7271 Thompson Road	16-Mar-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	10-Mar-2015	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	10-Mar-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	10-Mar-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	10-Mar-2015	L1	L1
KITSUKSIS ROAD, 6000 KITSUKSIS ROAD	10-Mar-2015	L1	L1
5535 Maple Road, 5535 Maple Road	3-Mar-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	3-Mar-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	3-Mar-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	3-Mar-2015	L1	L1
Strick Road Pumphouse	3-Mar-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	25-Feb-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	25-Feb-2015	L1	L1
Springfield Road, 6287 Springfield Road	25-Feb-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	18-Feb-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	18-Feb-2015	L1	L1
Strick Road Pumphouse	18-Feb-2015	L1	L1
Swanson Road, 7000 Swanson Road	18-Feb-2015	L1	L1
Thompson Road, 7271 Thompson Road	18-Feb-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	10-Feb-2015	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	10-Feb-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	10-Feb-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	10-Feb-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	10-Feb-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	5-Feb-2015	L1	L1

Show: 100 results per page

PREVIOUS NEXT

BEAVER CREEK WATER SYSTEM

Facility Location:
3008 5th Avenue
Port Alberni

Facility Information:
Facility Type: DWT

Facility Sampling History:

Location	Date	Total Coliform	E. Coli
5535 MAPLE ROAD, 5535 Maple Road	4-Feb-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	4-Feb-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	4-Feb-2015	L1	L1
Strick Road Pumphouse	4-Feb-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	27-Jan-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	27-Jan-2015	L1	L1
Springfield Road, 6287 Springfield Road	27-Jan-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	20-Jan-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	20-Jan-2015	L1	L1
Strick Road Pumphouse	20-Jan-2015	L1	L1
Swanson Road, 7000 Swanson Road	20-Jan-2015	L1	L1
Thompson Road, 7271 Thompson Road	20-Jan-2015	L1	L1
5667 Chapman Road, 5667 Chapman Road	14-Jan-2015	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	14-Jan-2015	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	14-Jan-2015	L1	L1
Dashwood Road, 7296 Dashwood Road	14-Jan-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	14-Jan-2015	L1	L1
6038 Beaver Creek Road, Bathroom - new shop	6-Jan-2015	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	6-Jan-2015	L1	L1
North Reservoir, 7656 Beaver Creek Road	6-Jan-2015	L1	L1
Strick Road Pumphouse	6-Jan-2015	L1	L1
Gill School Hydrant, 5520 Beaver Creek Road	16-Dec-2014	L1	L1
Kitsuksis Road, 6000 Kitsuksis Road	16-Dec-2014	L1	L1
Strick Road Pumphouse	16-Dec-2014	L1	L1
Swanson Road, 7000 Swanson Road	16-Dec-2014	L1	L1
Thompson Road, 7271 Thompson Road	16-Dec-2014	L1	L1
5667 Chapman Road, 5667 Chapman Road	9-Dec-2014	L1	L1
6210 Drinkwater Road, 6210 Drinkwater Road	9-Dec-2014	L1	L1
6825 Lamarque Road, 6825 Lamarque Road	9-Dec-2014	L1	L1
Dashwood Road, 7296 Dashwood Road	9-Dec-2014	L1	L1

Appendix C

Drinking Water Quality Links

Canadian Drinking Water Guidelines

http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/index-eng.php

Environmental Operators Certificate Program

http://eocp.ca/

Drinking Water Protection Act

http://www.bclaws.ca/civix/document/id/complete/statreg/01009_01

Island Health –Drinking Water

http://www.viha.ca/mho/water/

Appendix D

Island Health Authority Inspection Reports

BAMFIELD COMMUNITY WWS - Inspection Report

Inspection Information:

Facility Type: DWC
Inspection type: Routine
Inspection date: April 03, 2013
Follow-up Required: No

This facility was given a **low** hazard rating.
More information on hazard ratings.

Violations:

A summary of the violations found during the inspection are listed below.

Code	Description / Observation / Corrective Action
319	Inadequate Chemical Analysis Data Observation: *Samples collected Nov 2012 and Feb 2013 show THM's above the maximum acceptable concentration on the "Guideline's for Canadian Drinking Water Quality"; continue to monitor quarterly.*

Comments: Review of operation of the water system with the operator and ACRD management: - Surface source (Sugsaw Lake); screens are cleaned monthly. Turbidity is taken daily at the pumphouse with a hand-held turbidity meter; results are documented and normal results are <0.5 NTU. Looking at adding signage around the lake and near the submarine line to indicate it is a drinking water source. The Emergency Response Plan is up-to-date and present in the pumphouse; BWA signage is available. - A new chlorine analyzer was installed in 2012 and a new quill has installed at the chlorine injection point. - Operator maintains a chlorine residual of 0.2 ppm at the pumphouse. - Chlorine analyzer is alarmed with a call out to the operator and audible alarm when analyzer goes into alarm mode. - Distribution is flushed quarterly in the winter, operator has recently adjusted this to doing various branches of the system weekly. - System has two reservoirs; one reservoir was cleaned in 2012, the other was pressure-washed. - A new sampling port has been installed at the reservoirs. - Operator has been manually chlorinating at the reservoirs to maintain better residuals throughout the system; reports that this is working. - An automatic rechlorination station is being installed, a construction permit waiver was issued for this work January 2013. - Water system should be classified with the EOCP to ensure that the operator has the appropriate level of certification. - Recent bacteriological water sampling are satisfactory.

BEAVER CREEK WATER SYSTEM - Inspection Report

Inspection Information:

Facility Type: DWT
Inspection type: Routine
Inspection date: September 23, 2015
Follow-up Required: No

This facility was given a **low** hazard rating.
■More information on hazard ratings.

Violations:

No violations were found during the inspection

Comments: A site visit was conducted at the Strick Road pump station and the Stamp River pump station; the Environmental Services Manager and the Lead Water Operator were in attendance. The terms and conditions of the operating permit were reviewed; the water system is operating in compliance with conditions 1-6. Condition number 7 requires the system to be operated and maintained in accordance with BCWWA standards or equivalent. In house procedures for cross-connection control, distribution lines, reservoirs, disinfection equipment, system planning and sampling port are to be reviewed by the new management/staff to ensure appropriate standards are being followed. The 2014 Annual report is complete and available on the ACRD website; a copy must be provided to the EHO. The Emergency Response Plan must be reviewed and up-dated to reflect the recent changes in operation (i.e. new source and pump station) and staff. The ERP should contain procedures to address increases in turbidity and the use of the Stamp River in emergency situations. ERP must be submitted to the DWO when completed; must be completed by October 31, 2015. A regular monitoring programs is in place which includes chemical/physical parameters, bacteriological sampling, turbidity, chlorine residuals and disinfection by-products. Good records are maintained for all testing, monitoring and maintenance that occurs on the system. The concrete reservoir has been repaired (it was leaking) and has been placed back into service. Chlorine gas has been removed from the Stamp River pump station; if this source is needed for emergency purposes, sodium hypochlorite will be used.

ALBERNI VALLEY AIRPORT - Inspection Report

Inspection Information:

Facility Type: DWS
Inspection type: Routine
Inspection date: February 28, 2014
Follow-up Required: No

This facility was given a **low** hazard rating.
More information on hazard ratings.

Violations:

A summary of the violations found during the inspection are listed below.

Code	Description / Observation / Corrective Action
320	Interruption of Treatment Corrective Action: *UV system was in alarm mode at the time of inspection. Service technician has been called to look at the UV unit. Users have been notified that water should be boiled prior to use.*

Comments: A new UV unit was added to the system in 2012; prior to 2012 the system consisted of a shallow dug well with no disinfection. It is recommended that the treatment be monitored frequently to ensure the UV is working properly (currently only checked monthly). Samples are submitted monthly for bacteriological testing, all recent results are satisfactory. Most recent chemical results are from 2012, results are below the requirement of the Canadian Drinking Water Guidelines. Building that houses the well and treatment is secure and well maintained. Ensure the UV equipment is maintained as recommended by the manufacturer or as required by the operation including filter changes, bulb replacement and sleeve cleaning. An annual flushing and disinfection program is recommended. An emergency response plan is available for this water system and has recently been reviewed. *Information about the filters and UV must be added to the ERP. Follow up March 6th: UV sensor has been fixed and a follow up sample was submitted on March 5th.

TOFINO AIRPORT WATER SYSTEM - Inspection Report

Inspection Information:
Facility Type: DWS
Inspection type: Routine
Inspection date: March 05, 2013
Follow-up Required: No

This facility was given a **low** hazard rating.
■More information on hazard ratings.

Violations:
No violations were found during the inspection

Comments: - Water system includes: two wells (only one in use), treatment for removal of iron and manganese, chlorination of water, reservoir, re-chlorination before entering distribution. Test wells have been drilled; the intent is to bring on an additional source to address concerns with the yield of the existing wells. Prior to wells being used, source approval must be obtained from VIHA. Information on this process has been provided to the operator of the system. Operator is to check with the well driller to ensure the well located next to the pumphouse is properly sealed. - Chemical/physical analysis was conducted on the raw water in 2011. Turbidity, iron, manganese and colour were above the aesthetic objectives of the Guidelines for Canadian Drinking Water Quality; these parameters are addressed with the ion exchange treatment. - Samples are submitted monthly from three sites for bacteriological monitoring; all recent samples are satisfactory. - An Emergency Response Plan is in place, ensure that this is reviewed annually and provide any revisions to the EHO. - Component of the system (wells, pumphouse, reservoir) are secured by means of fencing and locked doors/hatches. - Chlorine residuals are monitored and recorded regularly. - Annual report for 2012 is now posted on the ACRD website.

MILLSTREAM COMMUNITY WATER SYSTEM - Inspection Report

Inspection Information:

Facility Type: DWC
Inspection type: Routine
Inspection date: January 16, 2014
Follow-up Required: No

This facility was given a **low** hazard rating.
■More information on hazard ratings.

Violations:

No violations were found during the inspection

Comments: There has been no recent changes to the system. System consists of two shallow wells, chlorination for disinfection and a storage reservoir. All recent bacteriological samples are good, raw sample to be added. A sample has recently been submitted for chemical analysis; please forward results to the EHO. Water system operator has the appropriate training. An annual report for the system is incorporated into the ACRD report and is available on the ACRD website. The pump house and reservoir are secured. Chlorine residuals are monitored daily; good records are maintained for the system. Chlorine residual was 0.3 mg/L at the pump house and reservoir at the time of inspection. Ensure upgrades to the system are done in consultation with Island Health and that necessary construction permits are obtained.