

DRINKING WATER SYSTEM ANNUAL REPORT

Reporting Period: January 1st to December 31st, 2021 (year)

Water System Village of Harrison Hot Springs Art Gallery

Water System Owner Village of Harrison Hot Springs

Primary Contact Name (Operator or Manager) Tyler Simmonds

Phone Number (Operator or Manager) 604-798-5974

E-mail (Operator or Manager) tsimmonds@harrisonhotsprings.ca

DESCRIBE YOUR WATER SUPPLY SYSTEM

What is the Source(s) of Raw Water?

☐ Deep Well ☒ Shallow Well ☐ Surface Water ☐ Other

If other, specify details:

Does the Drinking Water System have Primary Disinfection? ☒ Yes ☐ No

☐ Chlorination ☒ Ultraviolet Light ☐ Ozone ☐ Other

If other, specify details:

Does the Drinking Water System have Secondary Disinfection? ☐ Yes ☒ No

☐ Chlorination ☒ Other

If other, specify details:

Does the Drinking Water System have Filtration? ☒ Yes ☐ No

Check all boxes that apply

☒ Cartridge Filter(s) ☐ Carbon Filter ☐ Sand Filtration ☐ Reverse Osmosis ☒ Other

If other, specify details: Ultra Filtration Membrane

PUBLIC REPORTING

Emergency Response & Contingency Plan (ERCP)

Is your ERCP up to Date? ☒ Yes ☐ No

How do you Inform the System Users of the ERCP?

☐ Hand Delivered ☐ Bulletin Board ☐ Newspaper ☐ Utility Bill Insert ☒ Website

☐ Other (specify details)

Drinking Water System Annual Report**How do you Inform the System Users of the Annual Report?**

☐ Hand Delivered ☐ Bulletin Board ☐ Newspaper ☐ Utility Bill Insert ☒ Website

☐ Other (specify details)

COMPLIANCE WITH OPERATING PERMIT

List the conditions that have been placed on your Operating Permit (if you have conditions, these will be stated on your permit):

Are you in compliance with the conditions listed on your Operating Permit? ☐ Yes ☐ No ☒ N/A

BACTERIOLOGICAL TESTING AND DRINKING WATER PROTECTION REGULATION WATER QUALITY STANDARDS

How many bacteriological samples were collected during this reporting period? 24

What is the minimum required sampling frequency for this system? (#samples/month) 2/month

Additional sampling details:

Was the minimum required sampling frequency achieved? ☒ Yes ☐ No

Comments:

Bacteriological summary attached to this report? ☒ Yes ☐ No

If no, how do the users of the system view the results?

WATER QUALITY STANDARDS FOR POTABLE WATER

Parameter:	Standard:	Did this system meet standard?	
Escherichia coli (for all samples)	No detectable <i>Escherichia coli</i> per 100ml	☒ Yes	☐ No
Total Coliform Bacteria (if only 1 sample collected in a 30 day period)	No detectable total coliform bacteria per 100ml	☐ Yes	☐ No
Total Coliform Bacteria (if more than 1 sample collected in a 30 day period)	No more than 10% of samples contain total coliform bacteria, and No sample has more than 10 total coliform bacteria per 100ml	☒ Yes	☐ No

If the system did not meet any of above Drinking Water Protection Regulation standards, record the results in the table below; attach additional sheets if necessary.

Date	TC/100ml	E.coli/100ml	Reason	Corrective Action

CHEMICAL SAMPLING COMPLETED DURING THIS REPORTING PERIOD

Was any chemical sampling conducted during reporting period? ☒ Yes ☐ No

If no, when were the last chemical samples conducted for this system?

(date) ☐ Don't Know ☐ Never

If yes, did all water samples meet the Guidelines for Canadian Drinking Water Quality?

☒ Yes ☐ No

If any water samples did not meet the Guidelines for Canadian Drinking Water Quality, record the results in the table below; attach additional sheets if necessary.

Parameter	Result	Corrective Action / Treatment / Comments

ADDITIONAL TESTING

Does the system have analyzers for continuous monitoring? ☐ Yes ☒ No

If yes, check all boxes that apply:

☐ Chlorine ☐ Turbidity ☐ Other (details)

Are the results available on request?

If any additional testing or sampling was conducted, record results in the table below; attach additional sheets if necessary.

Additional Testing & Reason for Sampling	Corrective Action Taken

WATER QUALITY COMPLAINTS

Were there any water quality complaints in this reporting period? (e.g. taste, odour, colour etc.) ☐ Yes ☐ No

If yes, complete the table below; attach additional sheets if necessary.

Date	Water Quality Complaint	Corrective Action / Treatment

OPERATIONAL PROBLEMS

Were there any operational problems during this reporting period? (e.g. insufficient water supply, malfunction of disinfection equipment, line breaks, elevated turbidity etc.).

☐ Yes☒ No

If yes, complete the table below; attach additional sheets if necessary.

Incident Date	Type of Operational Problem	Corrective Action Taken

MAJOR UPGRADES/REPAIRS & EXPENSES

Were there any major upgrades/repairs or any major costs incurred during this reporting period?

☐ Yes☒ No

If yes, complete the table below; attach additional sheets if necessary.

Major Upgrades/Expenses	Details
Improvements required by DWO	
Additions/changes to system	
Purchase or install new equipment	
Equipment repair or replacement	
Annual maintenance of system	
Specialist report	
Other	

FUTURE IMPROVEMENTS

Are there any plans for future improvements?

☐ Yes☒ No

If yes, complete the table below; attach additional sheets if necessary.

Future Upgrades or Improvements	Estimated Date of Completion

DATE COMPLETED: 11-Feb-2022

COMPLETED BY: Tyler Simmonds

RECEIVED

FEB 07 2022

BY VILLAGE OF HARRISON HOT SPRINGS

Sample Range Report

Fraser Health Authority

Facility Name: Village of Harrison Hot Springs Art Gallery

Date Range: Jan 1 2021 to Dec 31 2021

Operator Tyler Simmonds
 Box 160, 495 Hot Springs Rd
 Harrison Hot Springs, BC V0M 1K0

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>Kitchen Tap, 98</u>				
<u>Rockwell Dr</u>				
	1-4-2021 9:25:00 AM	LT1	LT1	
	1-18-2021 10:30:00 AM	LT1	LT1	
	2-1-2021 10:20:00 AM	LT1	LT1	
	2-16-2021 11:00:00 AM	LT1	LT1	
	3-1-2021 10:20:00 AM	LT1	LT1	
	3-15-2021 10:15:00 AM	LT1	LT1	
	4-6-2021 11:30:00 AM	LT1	LT1	
	4-6-2021			
	4-19-2021 10:15:00 AM	LT1	LT1	
	5-3-2021 10:05:00 AM	LT1	LT1	
	5-17-2021 10:15:00 AM	LT1	LT1	
	5-31-2021 10:29:00 AM	LT1	LT1	
	6-14-2021 10:51:00 AM	LT1	LT1	
	7-5-2021 10:16:00 AM	LT1	LT1	
	7-19-2021 10:17:00 AM	LT1	LT1	
	8-3-2021 10:30:00 AM	LT1	LT1	
	8-16-2021 10:17:00 AM	LT1	LT1	
	9-7-2021 8:45:00 AM	LT1	LT1	
	9-20-2021 10:25:00 AM	LT1	LT1	
	10-4-2021 9:15:00 AM	LT1	LT1	
	10-18-2021 10:05:00 AM	LT1	LT1	

11-1-2021 10:25:00 AM	LT1	LT1	
12-6-2021 10:30:00 AM	LT1	LT1	
12-20-2021 10:15:00 AM	<u>LT1</u>	<u>LT1</u>	
Total Positive:	0	0	0

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

Samples that contain total coliform:	0	0.00% of total
Samples that contain e. coli:	0	0.00% of total
Samples that contain fecal coliform:	0	0.00% of total
Number of consecutive samples that contain total coliform:	0	
Number of samples that contain total coliform in last 30 days:	0/0	
Total number of samples:	24	

Comments:

Environmental Health Officer
Jan 27 2022

FOR FURTHER INFORMATION PLEASE CALL: David Fowler



Environmental

CERTIFICATE OF ANALYSIS

Work Order	: VA21B2249	Page	: 1 of 4
Amendment	: 1		
Client	: Village of Harrison Hot Springs	Laboratory	: Vancouver - Environmental
Contact	: Tyler Simmonds	Account Manager	: Sneha Sansare
Address	: PO Box 160 495 Hot Springs Road Harrison Hot Springs BC Canada V0M 1K0	Address	: 8081 Loughheed Highway Burnaby BC Canada V5A 1W9
Telephone	: ---	Telephone	: +1 604 253 4188
Project	: WTP June 2021	Date Samples Received	: 17-Jun-2021 13:55
PO	: 17787	Date Analysis Commenced	: 17-Jun-2021
C-O-C number	: ---	Issue Date	: 28-Jun-2021 17:47
Sampler	: Tyler		
Site	: ---		
Quote number	: Quote for Harrison Hot Springs		
No. of samples received	: 4		
No. of samples analysed	: 4		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	Position	Laboratory Department
Adam Boettger	Team Leader - LCMS	LCMS, Waterloo, Ontario
Angela Ren	Team Leader - Metals	Metals, Burnaby, British Columbia
Dee Lee	Analyst	Metals, Burnaby, British Columbia
Lindsay Gung	Supervisor - Water Chemistry	Inorganics, Burnaby, British Columbia
Lindsay Gung	Supervisor - Water Chemistry	Microbiology, Burnaby, British Columbia



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Work Order : VA21B2249 Amendment 1
Client : Village of Harrison Hot Springs
Project : WTP June 2021

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported result is less than (<) the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference. Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key : CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances
LOR: Limit of Reporting (detection limit).

Unit	Description
µg/L	micrograms per litre
µS/cm	Microsiemens per centimetre
CU	colour units (1 CU = 1 mg/L Pt)
mg/L	milligrams per litre
MPN/100mL	most probable number per 100 mL
NTU	nephelometric turbidity units
pH units	pH units

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED ON SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.



Analytical Results

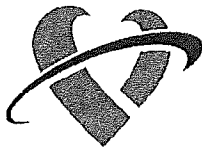
Sub-Matrix: Water		Client sample ID				Raw Water		Treated Water		Peace Park		Art Gallery	
(Matrix: Water)		Client sampling date / time				17-Jun-2021 09:00		17-Jun-2021 09:00		17-Jun-2021 09:00		17-Jun-2021 09:00	
Analyte	CAS Number	Method	LOR	Unit		VA21B2249-001	VA21B2249-002	VA21B2249-003	VA21B2249-004				
Physical Tests													
alkalinity, total (as CaCO ₃)		E290	1.0	mg/L		17.2	17.0	17.3	31.4				
colour, true		E329	5.0	CU		<5.0	<5.0	<5.0	<5.0				
conductivity		E100	2.0	µS/cm		47.1	51.8	52.5	93.9				
pH		E108	0.10	pH units		7.42	7.43	7.44	7.49				
solids, total dissolved [TDS]		E162	10	mg/L		34	38	39	69				
turbidity		E121	0.10	NTU		0.36	<0.10	<0.10	0.10				
hardness (as CaCO ₃), from total Ca/Mg		EC100A	0.60	mg/L		18.2	18.1	18.6	31.2				
Anions and Nutrients													
chloride	16887-00-6	E235.Cl	0.50	mg/L		0.72	1.83	1.84	4.82				
fluoride	16984-48-8	E235.F	0.020	mg/L		<0.020	<0.020	<0.020	<0.020				
nitrate (as N)	14797-55-8	E235.NO3-L	0.0050	mg/L		0.0566	0.0607	0.0620	0.0213				
nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L		<0.0010	<0.0010	<0.0010	<0.0010				
sulfate (as SO ₄)	14808-79-8	E235.SO4	0.30	mg/L		5.33	5.35	5.35	6.35				
Bacteriological Tests													
coliforms, total		E010	1	MPN/100mL		3	<1	<1	<1				
coliforms, Escherichia coli [E. coli]		E010	1	MPN/100mL		<1	<1	<1	<1				
Total Metals													
aluminum, total	7429-90-5	E420	0.0100	mg/L		0.0315	0.0158	0.0143	<0.0100				
antimony, total	7440-36-0	E420	0.00050	mg/L		<0.00050	<0.00050	<0.00050	0.00067				
arsenic, total	7440-38-2	E420	0.00010	mg/L		0.00024	0.00019	0.00020	<0.00010				
barium, total	7440-39-3	E420	0.0200	mg/L		<0.0200	<0.0200	<0.0200	<0.0200				
boron, total	7440-42-8	E420	0.100	mg/L		<0.100	<0.100	<0.100	<0.100				
cadmium, total	7440-43-9	E420	0.000200	mg/L		<0.000200	<0.000200	<0.000200	<0.000200				
calcium, total	7440-70-2	E420	0.100	mg/L		6.18	6.11	6.32	10.9				
chromium, total	7440-47-3	E420	0.00200	mg/L		<0.00200	<0.00200	<0.00200	<0.00200				
copper, total	7440-50-8	E420	0.00100	mg/L		<0.00100	<0.00100	<0.00100	0.102				
iron, total	7439-89-6	E420	0.030	mg/L		<0.030	<0.030	<0.030	<0.030				
lead, total	7439-92-1	E420	0.000500	mg/L		<0.000500	<0.000500	<0.000500	0.00188				
magnesium, total	7439-95-4	E420	0.100	mg/L		0.679	0.691	0.692	0.981				
manganese, total	7439-96-5	E420	0.00200	mg/L		<0.00200	<0.00200	<0.00200	<0.00200				



Analytical Results

Sub-Matrix: Water (Matrix: Water)		Client sample ID				Raw Water	Treated Water	Peace Park	Art Gallery	Matrix
		Client sampling date / time				17-Jun-2021 09:00	17-Jun-2021 09:00	17-Jun-2021 09:00	17-Jun-2021 09:00	Matrix
Analyte	CAS Number	Method	LOR	Unit	VA21B2249-001	VA21B2249-002	VA21B2249-003	VA21B2249-004	Matrix	
Total Metals										
mercury, total	7439-97-6	E508	0.0000050	mg/L	<0.0000050	<0.0000050	<0.0000050	<0.0000050	Matrix	
potassium, total	7440-09-7	E420	0.100	mg/L	0.632	0.661	0.657	0.652	Matrix	
selenium, total	7782-49-2	E420	0.00100	mg/L	<0.00100	<0.00100	<0.00100	<0.00100	Matrix	
sodium, total	17341-25-2	E420	2.00	mg/L	<2.00	2.27	2.27	4.38	Matrix	
uranium, total	7440-61-1	E420	0.000100	mg/L	<0.000100	<0.000100	<0.000100	<0.000100	Matrix	
zinc, total	7440-66-6	E420	0.0500	mg/L	<0.0500	<0.0500	<0.0500	1.18	Matrix	
Haloacetic Acids										
bromochloroacetic acid	5589-96-8	E750	1.00	µg/L	Matrix	<1.00	<1.00	Matrix	Matrix	
dibromoacetic acid	631-64-1	E750	1.00	µg/L	Matrix	<1.00	<1.00	Matrix	Matrix	
dichloroacetic acid	79-43-6	E750	1.00	µg/L	Matrix	12.2	12.3	Matrix	Matrix	
monobromoacetic acid	79-08-3	E750	1.00	µg/L	Matrix	<1.00	<1.00	Matrix	Matrix	
monochloroacetic acid	79-11-8	E750	1.00	µg/L	Matrix	<1.00	<1.00	Matrix	Matrix	
trichloroacetic acid	76-03-9	E750	1.00	µg/L	Matrix	16.7	18.7	Matrix	Matrix	
haloacetic acids, total [HAA5]	Matrix	E750	5.00	µg/L	Matrix	28.9	31.0	Matrix	Matrix	

Please refer to the General Comments section for an explanation of any qualifiers detected.



fraserhealth Better health.
Best in health care.

February 1, 2022

Water System Operators

Re: Metals in Drinking Water – “Flush” Message in Annual Reports

Fraser Health has recently revised its metals at the tap “Flush” message and we are asking all water systems to please include the following health message with your next annual reports to your users.

Anytime the water in a particular faucet has not been used for six hours or longer, “flush” your cold-water pipes by running the water until you notice a change in temperature. (This could take as little as five to thirty seconds if there has been recent heavy water use such as showering or toilet flushing. Otherwise, it could take two minutes or longer.) The more time water has been sitting in your home's pipes, the more lead it may contain.

Use only water from the cold-tap for drinking, cooking, and especially making baby formula. Hot water is likely to contain higher levels of lead.

The two actions recommended above are very important to the health of your family. They will probably be effective in reducing lead levels because most of the lead in household water usually comes from the plumbing in your house, not from the local water supply.

Conserving water is still important. Rather than just running the water down the drain you could use the water for things such as watering your plants.

If you have any questions, please contact our Drinking Water Program at 604-870-7903.

Sincerely,

Drinking Water Program
Fraser Health Authority
HPLand@fraserhealth.ca