

DRINKING WATER SYSTEM ANNUAL REPORT

Reporting Period: January 1st to December 31st, 2020 (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:

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? 23

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: Second sample in December not collected due to Fraser Health Office Christmas closure.

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
13-Nov-2020	Low water pressure	New well pump and pressure tank

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	Replace well pump and pressure tank
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: 19-Feb-2021

COMPLETED BY: Tyler Simmonds

February 1, 2021

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

Sample Range Report

Fraser Health Authority

Facility Name: Village of Harrison Hot Springs Art Gallery
Date Range: Jan 1 2020 to Dec 31 2020

Operator

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
<u>Kitchen Tap, 98</u>				
<u>Rockwell Dr</u>				
	1-6-2020	L1	L1	
	1-20-2020	L1	L1	
	2-3-2020 11:00:00 AM	LT1	LT1	
	2-6-2020 10:30:00 AM	LT1	LT1	
	2-18-2020 11:00:00 AM	LT1	LT1	
	3-2-2020 11:00:00 AM	LT1	LT1	
	3-17-2020 11:15:00 AM	LT1	LT1	
	4-21-2020 10:30:00 AM	LT1	LT1	
	5-4-2020 11:55:00 AM	LT1	LT1	
	5-19-2020 10:30:00 AM	LT1	LT1	
	6-1-2020 12:10:00 PM	LT1	LT1	
	6-15-2020 10:30:00 AM	LT1	LT1	
	7-6-2020 9:45:00 AM	LT1	LT1	
	7-20-2020 10:10:00 AM	QRWRT	QRWRT	
	8-4-2020 10:50:00 AM	LT1	LT1	
	8-17-2020 10:00:00 AM	LT1	LT1	
	9-8-2020 10:35:00 AM	LT1	LT1	
	9-21-2020 10:40:00 AM	LT1	LT1	
	10-5-2020 10:30:00 AM	LT1	LT1	
	10-19-2020 10:10:00 AM	LT1	LT1	
	11-2-2020 12:00:00 PM	LT1	LT1	

11-16-2020 10:30:00 AM	LT1	LT1
12-7-2020 10:10:00 AM	<u>LT1</u>	<u>LT1</u>
Total Positive:	0	0

0

Result Values:	E - estimated	L - less than	G - greater than
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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:	23	

Comments:

Environmental Health Officer
Feb 18 2021

FOR FURTHER INFORMATION PLEASE CALL: David Fowler



Environmental

CERTIFICATE OF ANALYSIS

Work Order	: VA20A9150	Page	: 1 of 4
Client	: Village of Harrison Hot Springs	Laboratory	: Vancouver - Environmental
Contact	: Tyler Simmonds	Account Manager	: Rojina Ghavami
Address	: PO Box 160 495 Hot Springs Road Harrison Hot Springs BC Canada V0M 1K0	Address	: 8081 Lougheed Highway Burnaby BC Canada V5A 1W9
Telephone	: ---	Telephone	: +1 604 253 4188
Project	: June 2020 Water Samples	Date Samples Received	: 25-Jun-2020 13:00
PO	: 17074	Date Analysis Commenced	: 25-Jun-2020
C-O-C number	: 17-843717	Issue Date	: 06-Jul-2020 14:08
Sampler	: Bruce		
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
Caitlin Macey	Team Leader - Inorganics	Inorganics - Water Quality, Burnaby, British Columbia
Caitlin Macey	Team Leader - Inorganics	Microbiology, Burnaby, British Columbia
Cindy Tang	Team Leader - Inorganics	Inorganics - Water Quality, Burnaby, British Columbia
Lindsay Gung	Supervisor - Water Chemistry	Inorganics - Water Quality, Burnaby, British Columbia
Robin Weeks	Team Leader - Metals	Inorganics - Water Quality, Burnaby, British Columbia
Robin Weeks	Team Leader - Metals	Metals, Burnaby, British Columbia
Sandra Cummings	Interim Department Manager - LCMS	LCMS, Waterloo, Ontario



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 less than (<) result is higher 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
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 in reports identified as "Preliminary Report" are considered authorized for use.



Analytical Results

Sub-Matrix: Water
 (Matrix: Water)

Sub-Matrix: Water (Matrix: Water)		Client sample ID		Raw Water	Treated Water	Distribution System (Peace Park)	Art Gallery	---
		Client sampling date / time		25-Jun-2020 07:30	25-Jun-2020 07:30	25-Jun-2020 07:30	25-Jun-2020 07:30	---
Analyte	CAS Number	Method	LOR	Unit	VA20A9150-001	VA20A9150-002	VA20A9150-003	VA20A9150-004
Physical Tests								
alkalinity, total (as CaCO3)	---	E290	1.0	mg/L	16.5	17.0	16.7	40.7
colour, true	---	E329	5.0	CU	<5.0	<5.0	<5.0	<5.0
conductivity	---	E100	2.0	µS/cm	49.2	54.2	54.5	110
pH	---	E108	0.10	pH units	7.39	7.44	7.43	7.25
solids, total dissolved [TDS]	---	E162	10	mg/L	35	34	38	77
turbidity	---	E121	0.10	NTU	0.28	<0.10	<0.10	<0.10
hardness (as CaCO3), from total Ca/Mg	---	EC100A	0.60	mg/L	19.2	19.6	19.1	45.4
Anions and Nutrients								
chloride	16887-00-6	E235.Cl	0.50	mg/L	0.66	1.74	1.78	3.32
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	0.0494	0.0547	0.0566	0.0500
nitrite (as N)	14797-65-0	E235.NO2-L	0.0010	mg/L	<0.0010	<0.0010	<0.0010	<0.0010
sulfate (as SO4)	14808-79-8	E235.SO4	0.30	mg/L	5.22	5.24	5.24	6.53
Bacteriological Tests								
coliforms, Escherichia coli [E. coli]	---	E010.EC	1	MPN/100mL	<1	<1	<1	<1
coliforms, total	---	E010.TC	1	MPN/100mL	11	<1	<1	<1
Total Metals								
aluminum, total	7429-90-5	E420	0.0100	mg/L	0.0294	0.0121	0.0110	<0.0100
antimony, total	7440-36-0	E420	0.00050	mg/L	<0.00050	<0.00050	<0.00050	<0.00050
arsenic, total	7440-38-2	E420	0.00010	mg/L	0.00025	0.00017	0.00018	<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	6.46	6.56	6.47	15.5
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	0.00230	0.104
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	0.00235
magnesium, total	7439-95-4	E420	0.100	mg/L	0.750	0.775	0.723	1.63



Analytical Results

Sub-Matrix: Water
(Matrix: Water)

Client sample ID		Raw Water	Treated Water	Distribution System (Peace Park)	Art Gallery	
Client sampling date / time		25-Jun-2020 07:30	25-Jun-2020 07:30	25-Jun-2020 07:30	25-Jun-2020 07:30	---
Analyte	CAS Number Method	LOR	Unit	Result	Result	Result
Total Metals						
manganese, total	7439-96-5 E420	0.00200	mg/L	<0.00200	0.0118	---
mercury, total	7439-97-6 E508	0.0000050	mg/L	<0.0000050	<0.0000050	---
potassium, total	7440-09-7 E420	0.100	mg/L	0.628	0.616	---
selenium, total	7782-49-2 E420	0.00100	mg/L	<0.00100	<0.00100	---
sodium, total	7440-23-5 E420	2.00	mg/L	2.36	2.98	---
uranium, total	7440-61-1 E420	0.000100	mg/L	<0.000100	<0.000100	---
zinc, total	7440-66-6 E420	0.0500	mg/L	<0.0500	0.0543	---
Haloacetic Acids						
bromochloroacetic acid	5589-96-8 E750	1.00	µg/L	<1.00	<1.00	---
dibromoacetic acid	631-84-1 E750	1.00	µg/L	<1.00	<1.00	---
dichloroacetic acid	79-43-6 E750	1.00	µg/L	9.28	6.02	---
monobromoacetic acid	79-08-3 E750	1.00	µg/L	<1.00	<1.00	---
monochloroacetic acid	79-11-8 E750	1.00	µg/L	<1.00	<1.00	---
trichloroacetic acid	76-03-9 E750	1.00	µg/L	15.0	18.7	---
haloacetic acids, total [HAA5]	---	5.00	µg/L	24.3	24.7	---

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

Water Sample Schedule 2021

Date	Site 1	Site 2	Site 3	
January				
4	290 Esplanade	459 naismith	98 Rockwell Dr	
11	Beach Washrooms	526 Driftwood		
18	Public Works Office	973 Hotsprings Rd/Tap	98 Rockwell Dr	
25	Peace Park	Community Garden		
Febuary				
1	170 Cedar	442 Pine	98 Rockwell Dr	
8	Boatlaunch Washrooms	843 Myng		
15	Echo (Spring Park)	Water Treatment Plant	98 Rockwell Dr	
22	290 Esplanade	459 naismith		
March				
1	Beach Washrooms	526 Driftwood	98 Rockwell Dr	
8	Public Works Office	973 Hotsprings Rd/Tap		
15	Peace Park	Community Garden	98 Rockwell Dr	
22	170 Cedar	442 Pine		
29	Boatlaunch Washrooms	843 Myng		
April				
5	Echo (Spring Park)	Water Treatment Plant	98 Rockwell Dr	
12	290 Esplanade	459 naismith		
19	Beach Washrooms	526 Driftwood	98 Rockwell Dr	
26	Public Works Office	973 Hotsprings Rd/Tap		
May				
3	Peace Park	Community Garden	98 Rockwell Dr	
10	170 Cedar	442 Pine		
17	Boatlaunch Washrooms	843 Myng	98 Rockwell Dr	
24	Echo (Spring Park)	Water Treatment Plant		
31	290 Esplanade	459 naismith	98 Rockwell Dr	
June				
7	Beach Washrooms	526 Driftwood		
14	Public Works Office	973 Hotsprings Rd/Tap	98 Rockwell Dr	
21	Peace Park	Community Garden		
28	170 Cedar	442 Pine		
July				
5	Boatlaunch Washrooms	843 Myng	98 Rockwell Dr	
12	Echo (Spring Park)	Water Treatment Plant		
19	290 Esplanade	459 naismith	98 Rockwell Dr	
26	Beach Washrooms	526 Driftwood		
August				
2	Public Works Office	973 Hotsprings Rd/Tap	98 Rockwell Dr	
9	Peace Park	Community Garden		
16	170 Cedar	442 Pine	98 Rockwell Dr	
23	Boatlaunch Washrooms	843 Myng		
30	Echo (Spring Park)	Water Treatment Plant		

Water Sample Schedule 2021

September				
6	290 Esplanade	459 naismith	98 Rockwell Dr	
13	Beach Washrooms	526 Driftwood		
20	Public Works Office	973 Hotsprings Rd/Tap	98 Rockwell Dr	
27	Peace Park	Community Garden		
October				
4	170 Cedar	442 Pine	98 Rockwell Dr	
11	Boatlaunch Washrooms	843 Myng		
18	Echo (Spring Park)	Water Treatment Plant	98 Rockwell Dr	
25	290 Esplanade	459 naismith		
November				
1	Beach Washrooms	526 Driftwood	98 Rockwell Dr	
8	Public Works Office	973 Hotsprings Rd/Tap		
15	Peace Park	Community Garden	98 Rockwell Dr	
22	170 Cedar	442 Pine		
29	Boatlaunch Washrooms	843 Myng		
December				
6	Echo (Spring Park)	Water Treatment Plant	98 Rockwell Dr	
13	290 Esplanade	459 naismith		
20	Beach Washrooms	526 Driftwood	98 rockwell Dr	
27	Public Works Office	973 Hotsprings Rd/Tap		