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March 6, 2023

Dear: Water System Operator

Re: Annual Reporting Requirements for Permitted Water Systems

Please find enclosed a copy of the 2022 Range Report for your water system. This report contains a summary of the bacteriological water quality results for the samples submitted through Fraser Health from your water system within the 2022 calendar year. As per the Drinking Water Protection Act the report is required to be made available to all users by June 30th 2022.

Please email david.fowler@fraserhealth.ca if you would like to request a copy of the Annual Report Template.

The following are reminders for all water system operators:

a) As drinking water testing has been deemed an essential service, all health units continue to remain open for sample drop-off on their regular designated days.

b) Please do not use expired requisition forms as this will result in the samples either not being processed or results not being returned properly from the lab. Please discard all expired requisition forms. The expiration date is located on the bottom of the form.

c) Please do not modify sample sites or other sections on the requisition forms. Key information is contained in the barcode and the lab is unable to include handwritten information. Please contact david.fowler@fraserhealth.ca to request any changes to your requisition forms.

d) Ensure the lead flush message provided is included with your Annual Report.

e) The coding system from BCCDC has recently changed.

QRWRT indicates that the sample exceeded the 30 hour hold time. This could be due to courier issues or an incorrect date being recorded by the operator on the requisition forms. Water systems will still be given credit for the sample collected and a qualitative result is provided to Fraser Health. If there is bacteria detected, a separate email will be sent to the operator from Fraser Health.

REJCT DELAY3 indicates that the sample has been rejected as it has been too long in transit. No results will be provided for this sample.

Sincerely,

David Fowler

David Fowler
Environmental Health Officer, Fraser Health Authority
David.fowler@fraserhealth.ca

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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

DRINKING WATER SYSTEM ANNUAL REPORT

Reporting Period: January 1st to December 31st , 2022 (year)

Water System Morris Valley Water System

Water System Owner Fraser Valley Regional District

Primary Contact Name (Operator or Manager) Dave Roblin

Phone Number (Operator or Manager) 604 798 5426

E-mail (Operator or Manager) droblin@fvrd.ca

DESCRIBE YOUR WATER SUPPLY SYSTEM

What is the Source{s) of Raw Water?

X Deep Well O Shallow Well D Surface Water D Other

If other, specify details:

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

D Chlorination D Ultraviolet Light D Ozone D Other

If other, specify details:

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

D Chlorination ☐Other

If other, specify details:

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

Check all boxes that apply

D Cartridge Filter(s) D Carbon Filter D Sand Filtration D Reverse Osmosis D Other

If other, specify details:

PUBLIC REPORTING

Emergency Response & Contingency Plan (ERCP)

Is your ERCP up to Date? X Yes ☐ No

How do you Inform the System Users of the ERCP?

D Hand Delivered D Bulletin Board D Newspaper 0 Utility Bill Insert X Website

D Other (specify details)

Drinking Water System Annual Report

How do you Inform the System Users of the Annual Report?

0 Hand Delivered O Bulletin Board D Newspaper 0 Utility Bill Insert X Website

D 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 fisted an your Operating Permit? X Yes D No ON/A

BACTERIOLOGICAL TESTING AND DRINKING WATER PROTECTION REGULATION WATER QUALITY STANDARDS

How many bacteriological samples were collected during this reporting period?	*26*
What is the minimum required sampling frequency for this system? (#samples/month)	*4*

Additional sampling details:

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

Comm ents :

Bacteriological summary attached to this report? X 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 *Escherichia coli* per 100ml	X Yes	☐ No
Total Coliform Bacteria *(if only 1 sample collected in a 30 day eriad)*	No detectable total coliform bacteria per 100ml	X Yes	0No
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	X Ye s	☐ 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/l00ml	E.coli/l00ml	Reason	Corrective Action
		1	qrwrt	Sample not delivered on time no e coli found

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?	*If yes, did all water samples meet the Guidelines for Canadian Drinking Water Quality?*
(date) D Don't Know 0 Never	☒ 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 O Turbidity 0 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

x

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	X 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	X 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	

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

Future Upgrades or Improvements	Estimated Date of Completion

DATE COMPLETED: June 13, 2023	COMPLETED BY: Dave Roblin	

Sample Range Report

Fraser Health Authority

Facility Name: Morris Valley Bulk Water System
Date Range: Jan 1 2022 to Dec 31 2022

Operator Fraser Valley Regional District
45950 Cheam Ave
Chilliwack, BC V2P 1N6

Sampling Site	Date Collected	Total Coliform	E. Coli	Fecal Coliform
Morris Valley Wellhead, 14600 Morris Valley Rd	1-4-2022 11:10:00 AM	LT1	LT1	
	1-18-2022 11:00:00 AM	LT1	LT1	
	2-1-2022 11:15:00 AM	LT1	LT1	
	2-15-2022 11:15:00 AM	LT1	LT1	
	3-1-2022 11:30:00 AM	LT1	LT1	
	3-15-2022 11:51:00 AM	LT1	LT1	
	3-29-2022 12:20:00 PM	LT1	LT1	
	4-12-2022 12:20:00 PM	LT1	LT1	
	4-26-2022 11:40:00 AM	LT1	LT1	
	5-10-2022 11:50:00 AM	LT1	LT1	
	5-24-2022 11:00:00 AM	LT1	LT1	
	6-7-2022 11:30:00 AM	LT1	LT1	
	6-21-2022 11:00:00 AM	LT1	LT1	
	6-22-2022 11:30:00 AM	LT1	LT1	
	7-5-2022 12:00:00 PM	LT1	LT1	
	7-19-2022 10:30:00 AM	LT1	LT1	
	8-2-2022 8:35:00 AM	LT1	LT1	
	8-16-2022 12:00:00 PM	LT1	LT1	
	8-30-2022 11:20:00 AM	LT1	LT1	
	9-13-2022 11:30:00	LT1	LT1	

AM			
9-27-2022 11:00:00 AM	LT1	LT1	
10-11-2022 9:15:00 AM	LT1	LT1	
10-25-2022 11:30:00 AM	LT1	LT1	
11-8-2022 11:00:00 AM	LT1	LT1	
11-22-2022 11:00:00 AM	LT1	LT1	
12-6-2022 11:15:00 AM	QRWRT	QRWRT	
Total Positive:	0	1	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:	1	3.85% 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:	26	

Comments:

Environmental Health Officer
Feb 1 2023

FOR FURTHER INFORMATION PLEASE CALL: David Fowler

Element
#104, 19575-55 A Ave.
Surrey, British Columbia
V3S 8P8, Canada

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F: +1 (604) 514-3323
E: info.vancouver@element.com
W: www.element.com

Analytical Report

Bill To: Fraser Valley Regional District
1 - 45950 Cheam Ave.
Chilliwack, BC, Canada
V2P 1N6
Attn: Accounts Payable
Sampled By: B.Kafi
Company: FVRD

Project ID:
Project Name: Chem/Phys
Project Location: Northside
LSD:
P.O.:
Proj. Acct. code:

Lot ID: **1654374**
Control Number:
Date Received: May 30, 2023
Date Reported: Jun 6, 2023
Report Number: 2878158

Reference Number	1654374-6
Sample Date	May 30, 2023
Sample Time	11:30
Sample Location	
Sample Description	Morris Valley Well / 6.6 °C
Sample Matrix	Drinking Water

Analyte		Units	Result	Nominal Detection Limit	Guideline Limit	Guideline Comments
Metals Extractable						
Silicon	Extractable	mg/L	3.36	0.05		
Aluminum	Extractable	mg/L	<0.002	0.002	0.1 OG; 2.9 MAC	Below OG
Antimony	Extractable	mg/L	<0.0002	0.0002	0.006	Below MAC
Arsenic	Extractable	mg/L	<0.0002	0.0002	0.01	Below MAC
Barium	Extractable	mg/L	0.003	0.001	2.0	Below MAC
Boron	Extractable	mg/L	0.005	0.002	5	Below MAC
Cadmium	Extractable	mg/L	<0.00001	0.00001	0.007	Below MAC
Chromium	Extractable	mg/L	<0.0005	0.0005	0.05	Below MAC
Copper	Extractable	mg/L	<0.001	0.001	1 AO; 2 MAC	Below AO
Lead	Extractable	mg/L	<0.0001	0.0001	0.005	Below MAC
Selenium	Extractable	mg/L	<0.0002	0.0002	0.05	Below MAC
Strontium	Extractable	mg/L	0.008	0.001	7.0	Below MAC
Uranium	Extractable	mg/L	<0.0005	0.0005	0.02	Below MAC
Vanadium	Extractable	mg/L	0.0001	0.0001		
Zinc	Extractable	mg/L	<0.001	0.001	5	Below AO
Physical and Aggregate Properties						
Colour	Apparent, Potable	Colour units	<5	5	15	Below AO
Turbidity		NTU	0.2	0.1	0.1/0.3/1.0 OG	
Routine Water						
pH			6.77	1	7.0-10.5	Below OG Range
Electrical Conductivity	at 25 °C	µS/cm	25	1		
Calcium	Extractable	mg/L	3.3	0.2		
Magnesium	Extractable	mg/L	0.3	0.2		
Sodium	Extractable	mg/L	1.3	0.4	200	Below AO
Potassium	Extractable	mg/L	<0.4	0.4		
Iron	Extractable	mg/L	<0.01	0.01	0.3	Below AO
Manganese	Extractable	mg/L	<0.005	0.005	0.02 AO; 0.12 MAC	Below AO
Chloride	Dissolved	mg/L	2.8	0.4	250	Below AO
Fluoride		mg/L	<0.05	0.05	1.5	Below MAC
Nitrate - N		mg/L	0.14	0.01	10	Below MAC
Nitrite - N		mg/L	<0.005	0.005	1	Below MAC
Sulfate (SO4)	Extractable	mg/L	2	0.9	500	Below AO
T-Alkalinity	as CaCO3	mg/L	10	5		
Total Dissolved Solids		mg/L	15	1	500	Below AO
Hardness	as CaCO3	mg/L	10			