

North Shore Water Utility Nelson Ltd. Monthly Report

To: Pouria Mojtahedi, Large Water Systems Environmental Health Officer, Interior Health Authority
From: Aqua Diversities Inc.
Date: January 15th, 2024
Re: Monthly Report for North Shore Water Utility - **December 2023**

This document includes the following items as part of the monthly report for the North Shore Water Utility Nelson Ltd. (NSWU):

- 1.0 Daily Water Consumption**
- 2.0 Microbiological Test Results**
- 3.0 Operator Log Sheets and Water Quality Events**
- 4.0 Major Operational Events**
- 5.0 Records of Customer Feedback and Response**

Submission of this report is to enhance communication with the local Environment Health Officer (EHO) and meet requirements for status compliance on the conditions summarized in the Operating Permit.

1.0 Daily Water Consumption

Total water consumption in December was 5,758 m³; average daily consumption was 185.74m³/day. The average flow was 7.74 m³/hr.

2.0 Microbiological Test Results

A sample from both ends of the distribution system is collected and submitted to an accredited laboratory for bimonthly microbiological testing.

All monthly testing results satisfy the Maximum Allowable Concentration (MAC) standard as set out by the Guidelines for Canadian Drinking Water Quality (GCDWQ).

See **Appendix A** for Laboratory Results

3.0 Operator Log Sheets and Water Quality Events

NSWU continues to be tested on an every-other-day schedule as specified by the EHO. The log sheets include comments on the source, treatment, and distribution system events. Log sheets also include information on the weather for the corresponding test date, which helps correlate weather events to turbidity levels.

Throughout the month of December, chlorine residuals were maintained above 0.4 mg/L across the distribution system.

See **Appendix B** for Operator Log Sheets.

4.0 Major Operational Events.

There were no major events to report for the month of December.

Note that the pilot plant located in the Isaac Creek reservoir building continues to operate with the treated water going to waste (as per direction from EHE Marianne Crowe).

5.0 Records of Customer Feedback and Response

There were no customer inquiries in the month of December .

Report Reviewed by:



Nicole Ward, BSc.P.Ag. Project Manager

Appendix A

Laboratory Results

ANALYTICAL RESULTS

Sample ID	Main Jet				Sample #	1
Date/Time Sampled	2023-12-05	11:00 AM	Matrix	DW	Temperature on Receipt	6

Date/Time on Test 2023-12-05 5:35 PM

<u>Analyses</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>
Coliforms, Total	less than 1	CFU/100mL	1
Verified E.coli	less than 1	CFU/100mL	1

Sample ID	538 Johnstone Rd				Sample #	2
Date/Time Sampled	2023-12-05	11:00 AM	Matrix	DW	Temperature on Receipt	6

Date/Time on Test 2023-12-05 5:35 PM

<u>Analyses</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>
Coliforms, Total	less than 1	CFU/100mL	1
Verified E.coli	less than 1	CFU/100mL	1

Glossary of Terms

Less than 1	Less than the Reportable Detection Limit, except under circumstances where the detection limit is higher due to interferences, insufficient sample volume, or dilutions.
APHA	American Public Health Association
CFU/100mL	Colony Forming Units per 100 milliliters
Matrix	SW = Surface water, TW = Treated water, DW = Distribution water, UGW = Untreated Ground water, RW = Raw water
RDL	Reportable Detection Limit

References

ANALYTICAL RESULTS

Sample ID	Main Jet			Sample #	1	
Date/Time Sampled	2023-12-19	12:30 PM	Matrix	TW	Temperature on Receipt	10
Date/Time on Test	2023-12-19	5:10 PM				
<u>Analyses</u>		<u>Result</u>	<u>Units</u>	<u>RDL</u>		
Coliforms, Total		less than 1	CFU/100mL	1		
Verified E.coli		less than 1	CFU/100mL	1		

Sample ID	538 Johnstone Rd			Sample #	2	
Date/Time Sampled	2023-12-19	12:35 PM	Matrix	TW	Temperature on Receipt	10
Date/Time on Test	2023-12-19	5:10 PM				
<u>Analyses</u>		<u>Result</u>	<u>Units</u>	<u>RDL</u>		
Coliforms, Total		less than 1	CFU/100mL	1		
Verified E.coli		less than 1	CFU/100mL	1		

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References

Appendix B

Operator Log Sheet



304 - 625 Front Street
Nelson, BC | V1Z 6S9
www.northshorewater.com/nelson

NSWU Operator Log

Month: Dec-23

Date	Time	Meter reading from HM (MS)	OR Pu mp Setting %	CL2 pu mp duration	CL2 pu mp frequency	Raw Water Turbidity (Res.)	CL2 Residual (Res.)	OR Pu mp Setting	Raw Water Turbidity (Res.)	CL2 Residual (Res.)	CL2 Residual (Dist.)	CL2 Residual (Dist.)	Comments	Weather	Sampled By
YY/MM/DD			basic Cr			basic Cr, NTU	basic Cl ₂ mg/L	Sutherland Cr (1-10)	Sutherland Cl ₂ NTU	Sutherland Cl ₂ mg/L	mg/L	mg/L			
12/1/2023	8:00:00														
12/2/2023	8		40.00	2.00	3.00	0.58	0.71	-	-	-	-	-		snowing	CB
12/3/2023															
12/4/2023															
12/5/2023	10		4.0	3	3	1.07	0.61	-	-	-	0.4	0.61	Chlorine residual low due to high turbidity, increased	1 deg/min	CB/JW
12/6/2023	10		40.00	3.00	4.00	-	0.25	-	-	-	-	-	Batch dose 7.50ml		
12/7/2023	10		40.00	3.00	4.00	1.74	0.25	-	-	-	0.7	0.1	Batch dose 12.90 ml after 10 mins in event the night previous		
12/8/2023															
12/9/2023	10		40.00	3.00	4.00	0.94	0.63	-	-	-	-	-		snow	jw
12/10/2023															
12/11/2023	10		40.00	3.00	4.00	0.77	0.67	-	-	-	0.71	0.43	Wille Meter testis substitute for Minjet	overcast/snow	jw
12/12/2023															
12/13/2023															
12/14/2023	3:00	7708.00	40.00	3.00	4.00	0.47	0.67	-	-	-	0.36	0.51		-	FD
12/15/2023															
12/16/2023	3:00	-	4.0	3	4	0.34	0.59	-	-	-	-	-		-	FD
12/17/2023															
12/18/2023															
12/19/2023	11:00	8747	4.0	3	4	0.46	0.83	-	-	-	0.31	0.75	Microbac samples, topped up Cl ₂	OC snow/m in	FD
12/20/2023															
12/21/2023															
12/22/2023	9:00	9029	4.0	3	4	0.51	0.34	-	-	-	0.36	0.23		OC drizzle	jw
12/23/2023															
12/24/2023	3:00	-	4.0	3	4	0.7	0.75	-	-	-	-	-		-	FD
12/25/2023															
12/26/2023	3:00	9573	4.0	3	4	0.49	0.23	-	-	-	-	-		-2C	FD
12/27/2023															
12/28/2023	3:00	-	4.0	3	4	0.46	0.74	-	-	-	-	-		-	FD
12/29/2023															
12/30/2023	3:00	10912	4.0	3	4	0.33	0.36	-	-	-	-	-		3C	FD
12/31/2023															
Reading of flow meter for Sunny Side trailer court to be recorded once a month, USG							944601G		Date: Dec 12th						

