

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: August 15th, 2023
Re: Monthly Report for North Shore Water Utility - July 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 July was 7,014 m³; average daily consumption was 226.25m³/day. The average flow was 9.42 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 July, chlorine residuals were maintained above 0.5 mg/L across the distribution system.

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

4.0 Major Operational Events

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

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 July.

Report Reviewed by:

A handwritten signature in black ink, appearing to read 'N Ward', written in a cursive style.

Nicole Ward, BSc.P.Ag. Project Manager

Appendix A

Laboratory Results

ANALYTICAL RESULTS

Sample ID	Main Jet			Sample #	1	
Date/Time Sampled	2023-07-04	12:15 PM	Matrix	TW	Temperature on Receipt	17

Date/Time on Test 2023-07-04 5:45 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	2023-07-04	12:00 PM	Matrix	TW	Temperature on Receipt	18

Date/Time on Test 2023-07-04 5:45 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	538 Johnstone Rd			Sample #	1	
Date/Time Sampled	2023-07-18	11:30 AM	Matrix	TW	Temperature on Receipt	17
Date/Time on Test	2023-07-18	4:30 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	Main Jet			Sample #	2	
Date/Time Sampled	2023-07-18	11:45 AM	Matrix	TW	Temperature on Receipt	16
Date/Time on Test	2023-07-18	4:30 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, NZ V1: 496 www.northshorewaterutility.co.nz												NSWU Operator Log		
Month: <u>Jul-23</u>														
												MainJet		
												538 Johnstone Rd		
Date	Time	CL2 Pump Setting	CL2 pump duration	CL2 pump frequency	Raw Water Turbidity (Res.)	CL2 Residual (Res.)	CL2 Pump Setting	Raw Water Turbidity (Res.)	CL2 Residual (Res.)	CL2 Residual (Dist.)	CL2 Residual (Dist.)	Comments	Weather	Sampled By
YY/MM/DD	24:00:00	Isaac Cr. (1-10)	Isaac	Isaac	Isaac Cr. NTU	Isaac Cr. mg/L	Sutherland Cr.(1-10)	Sutherland Cr. NTU	Sutherland Cr. mg/L	mg/L	mg/L	Microbiological Sample Taken/Filter Change/Etc.	Precip./Temp.	
7/1/2023														
7/2/2023														
7/3/2023														
7/4/2023	11:45	40.00	2.00	6.00	0.81	0.68	9	0.41	0.63	0.52	0.6		Prt cl2 22	CG
7/5/2023														
7/6/2023														
7/7/2023	10:45	40.00	2.00	6.00	0.53	0.5	9	0.4	0.6	0.42	0.5	Sutherland CL2 Residual 0.2, batch dosed 750ml		CG
7/8/2023														
7/9/2023														
7/10/2023	9:19	40%	2.00	6.00	0.9	0.6	9	0.46	0.5		0.67	Cleaned both intakes and topped off both CL2.	32 Prt sun	CG
7/11/2023														
7/12/2023	2:00	40.00	2.00	6.00	0.9	0.63	9	0.54	0.57	0.73	0.6			
7/13/2023														
7/14/2023	12:33	40%	2.00	6.00	0.69	0.63	9	0.35	0.74	0.7	0.64		30 sunny/smok	CG
7/15/2023														
7/16/2023														
7/17/2023	9:00	40%	2	6	0.53	0.64	9	0.42	0.4		0.6	batch dosed Sutherland 750ml cl2, topped up cl2 at Isaac		CG
7/18/2023	11:30	40%	2	6	0.7	0.7	9	0.4	0.8	0.52	0.7			CG
7/19/2023														
7/20/2023	11:00	40%	2	6	0.5	0.55	9	0.49	0.73	0.52	0.61	Topped up cl2 at sutherland	Sun/23C	FD
7/21/2023														
7/22/2023														
7/23/2023														
7/24/2023														
7/25/2023	2:00	40	2	6	0.8	0.54	9	0.42	0.71	0.52	0.47	New car boy at sutherland	Sun 21C	FD
7/26/2023														
7/27/2023														
7/28/2023	3:00	40	2	6	0.76	0.6	9	0.41	0.68	0.48	0.72	Isaac reservoir cl2 topped up, turbidimeter flushed, cl2	Sun 32c	CG
7/29/2023														
7/30/2023														
7/31/2023														
Reading of flow meter for Sunny Side trailer court (to be recorded once a month)						926608	Date: July 31 2023							