

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: Sept 15th, 2023
Re: Monthly Report for North Shore Water Utility - **August 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 August was 6,276 m³; average daily consumption was 209.2m³/day. The average flow was 8.71 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 August, 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

As of August 15th For all customers of the North Shore Water Utility Level 1 Water Restrictions are now in effect. Customers are asked to conserve water.

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

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

Located and marked out abandoned lines that were leaking on customers' property. There were no customer inquiries in the month of August.

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	2023-08-01	11:00 AM	Matrix	TW	Temperature on Receipt	15

Date/Time on Test 2023-08-01 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	2023-08-01	11:15 AM	Matrix	TW	Temperature on Receipt	16

Date/Time on Test 2023-08-01 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

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	2023-08-29	10:30 AM	Matrix	TW	Temperature on Receipt	20
Date/Time on Test	2023-08-29	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	2023-08-29	10:45 AM	Matrix	TW	Temperature on Receipt	20
Date/Time on Test	2023-08-29	5:40 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

Appendix B

Operator Log Sheet

Month: Aug-23

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 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.	
8/1/2023	12	40.00	2.00	6.00	0.7	0.49	9	0.56	0.48	0.41	0.46	microbac samples taken from Mainjet and 538Johnston	32 sunny	CG
8/2/2023														
8/3/2023	9:30	40%	2.00	6.00	0.68	0.76	9	0.65	0.7	0.61	0.48	New carboy CL2 at sutherland	21 sun	FD
8/4/2023														
8/5/2023	8:00	40%	2.00	6.00	0.52	0.69	9	-	-	-	-		-	FD
8/6/2023														
8/7/2023														
8/8/2023	9:00	40%	2.00	6.00	0.75	0.72	8.5	0.49	0.88	0.55	0.62	New carboy at sutherland	16 rain	FD
8/9/2023														
8/10/2023	8:30	40	2.00	6.00	0.49	0.68	8.5	0.46	0.74	0.55	0.51		13	FD
8/11/2023														
8/12/2023														
8/13/2023														
8/14/2023														
8/15/2023	10:00	40.00	2.00	5.00	0.75	0.48	7	0.42	1.5	0.32	1.1	turned down CL2 pump setting to 7 because last cl2 is	40 sunny	CG
8/16/2023							6	0.5	1.3			intake flow to Sutherland reservoir has been throttled to allow the intake to fill up while serving the distribution system.		
8/17/2023	10:30	40	2	5	0.56	0.73	5	0.45	1.7	0.51	1.13	Sutherland CL2 pump pulse rate slowed down to 5 because residual is too high, throttling adjustments made		
8/18/2023	3:0	40	2	5	0.48	0.6	5	0.5	1.06			monitored and tested reservoirs as electrical outages in area effected them. CL2 topped up before weekend		
8/19/2023														
8/20/2023														
8/21/2023	11:00	40	2	5	0.58	0.62	5	0.32	1.14				27 sunny	CG
8/22/2023	3:00	40	2	5	0.5	0.73	5	0.47	0.88	0.65	0.8		18 rain	CG
8/23/2023														
8/24/2023	11:20	40	2	5	0.57	0.81	5	0.45	0.77	0.6	0.69	released the throttling of Sutherland intake, refilled bot	30 pt cloud	CG
8/25/2023														
8/26/2023														
8/27/2023														
8/28/2023														
8/29/2023	10:30	40	2	5	0.7	0.5	6	0.54	0.74	0.4	0.43	microbac samples taken from Mainjet and 538		
8/30/2023									0					
8/31/2023	1:45	40	2	5	0.47	0.87	6.5	0.45	0.31	0.71	0.48			
Reading of flow meter for Sunny Side trailer court (to be recorded once a month)						934237	Date:		Aug 31					