

## North Shore Water Utility Nelson Ltd. Monthly Report

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**To:** Pouria Mojtahedi, Large Water Systems Environmental Health Officer, Interior Health Authority  
**From:** Aqua Diversities Inc.  
**Date:** May 16, 2024  
**Re:** Monthly Report for North Shore Water Utility - **April 2024**

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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 April was 5,542 m<sup>3</sup>; average daily consumption was 184.9m<sup>3</sup>/day. The average flow was 7.70 m<sup>3</sup>/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 April, 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**

On April 2<sup>nd</sup>, a Water Quality Advisory was posted due to snow melt and heavy rain causing the turbidity  $\geq 1$  NTU. On April 16<sup>th</sup> A tree collapsed on the intake system at Isaac Creek's reservoir. Swift action was taken to remove the fallen tree and clear the vicinity to ensure the safety and functionality of the area. On April 22<sup>nd</sup>, the intake building at Sutherland underwent reinforcement and repair works. The IHA Health Officer was notified of this action. The NSWU website was updated, a text alert notification to subscribers was sent out and community signage was posted.

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

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 April.

Report Reviewed by:



Nicole Ward, BSc.P.Ag. Project Manager

# Appendix A

## Laboratory Results



Report# 4513  
Filename 220412AD.pdf

### ANALYTICAL RESULTS

|                   |                  |               |              |                        |   |
|-------------------|------------------|---------------|--------------|------------------------|---|
| Sample ID         | 538 Johnstone Rd |               |              | Sample #               | 1 |
| Date/Time Sampled | 2022-04-12       | 11:00 AM      | Matrix       | Temperature on Receipt | 9 |
| Date/Time on Test | 2022-04-12       | 5:30 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 | 2022-04-12 | 11:15 AM      | Matrix       | Temperature on Receipt | 8 |
| Date/Time on Test | 2022-04-12 | 5:30 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                      |   |

### 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



Report# 6732  
Filename 240423AD.pdf

**ANALYTICAL RESULTS**

|                   |                     |                        |    |
|-------------------|---------------------|------------------------|----|
| Sample ID         | Main Jet            | Sample #               | 1  |
| Date/Time Sampled | 2024-04-23 10:00 AM | Matrix                 | DW |
|                   |                     | Temperature on Receipt | 10 |

Date/Time on Test 2024-04-23 6:35 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         | NCCS 570 Johnstone Rd. | Sample #               | 2  |
| Date/Time Sampled | 2024-04-23 10:00 AM    | Matrix                 | DW |
|                   |                        | Temperature on Receipt | 10 |

Date/Time on Test 2024-04-23 6:35 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          |

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References

# Appendix B

## Operator Log Sheet

| Month: <u>Apr-24</u>   |          | NSWU Operator Log |                    |                            |                     |                      |                      |                    |   |                 |            |
|--|----------|-------------------|--------------------|----------------------------|---------------------|----------------------|----------------------|--------------------|---|-----------------|------------|
| Date   | Time     | CL2 pump duration | CL2 pump frequency | Raw Water Turbidity (Res.) | CL2 Residual (Res.) | CL2 Residual (Dist.) | CL2 Residual (Dist.) | Flow Meter Reading | Comments  | Weather         | Sampled By |
| YY/MM/DD   | 24:00:00 |                   |                    | Isaac Cr. NTU              | Isaac Cr. mg/L      | mg/L                 | mg/L                 | m3/Hr              | Microbiological Sample Taken/Filter Change/Etc.                                     | Precip./Temp.   |            |
| 4/1/2024   |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/2/2024   | 14:00    | 4                 | 5                  | 0.88                       | 0.76                | 0.49                 | 0.63                 | 29421              | WQA advisory boards placed in select locations                                      | 13c, sunny      | JW         |
| 4/3/2024   |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/4/2024   | 12:30    | 4                 | 5                  | 0.84                       | 0.59                | 0.73                 | 0.67                 | -                  |   |                 | CR         |
| 4/5/2024   |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/6/2024   | 7:52     | 4                 | 5                  | 0.83                       | 0.66                | -                    | -                    | -                  | Remote Monitoring   |                 |            |
| 4/7/2024   |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/8/2024   |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/9/2024   | 11:30    | 4                 | 5                  | 0.88                       | 0.58                | 0.71                 | 0.47                 | 30702              | Delivered 8 carboys of chlorine to Isaac, cleaned Sutherland intake                 | showers, 8c     | JW         |
| 4/10/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/11/2024  | 10:30    | 4                 | 5                  | 0.11                       | 0.53                | 0.8                  | 0.6                  | -                  |   |                 | WS         |
| 4/12/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/13/2024  | 7:52     | 4                 | 5                  | 0.77                       | 0.58                | -                    | -                    | -                  | Remote Monitoring   |                 | JW         |
| 4/14/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/15/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/16/2024  | 10:30    | 4                 | 5                  | 0.87                       | 0.77                | 0.59                 | 0.43                 | 32044              | Removed fallen tree from roof of Isaac intake, also cleared deadfall surrounding ar |                 | JW         |
| 4/17/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/18/2024  | 12:00    | 4                 | 4                  | 0.99                       | 0.7                 | 0.57                 | 0.34                 | -                  | Added 40L CL2 to main drum  |                 | WS         |
| 4/19/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/20/2024  | 7:52     | 4                 | 5                  | 1.06                       | 0.8                 | -                    | -                    | -                  | Remote Monitoring   |                 | JW         |
| 4/21/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/22/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/23/2024  | 11:00    | 4                 | 5                  | 1.02                       | 0.66                | 0.62                 | 0.48                 | 33417              |   | Sunny, 15c      | JW         |
| 4/24/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/25/2024  | 12:00    | 4                 | 5                  | 0.91                       | 0.66                | 0.55                 | 0.3                  | -                  |   |                 | WS         |
| 4/26/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/27/2024  | 7:52     | 4                 | 5                  | 0.99                       | 0.68                | -                    | -                    | -                  | Remote Monitoring   | y rain in after | JW         |
| 4/28/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/29/2024  |          |                   |                    |                            |                     |                      |                      |                    |   |                 |            |
| 4/30/2024  | 10:45    | 4                 | 5                  | 1.01                       | 0.7                 | 0.56                 | 0.53                 | 34756              | Updated permit sticker  | overcast        | JW         |
| Reading of flow meter for Sunny Side trailer court (to be recorded once a month) |          |                   |                    |                            |                     | 973738 G             | Date:                | Apr.2/2024         |   |                 |            |

# Appendix C

## Field Memos

## FIELD WORK MEMO

DATE: 04/23/24 TIME: 2hrs VEHICLE: PERSONAL  COMPANY  DISTANCE: 5km  
 PROJECT: NSWU, Isaac Reservoir - Clear Deadfall TYPE OF WORKS: Site Maintenance  
 WORKS REQUESTED: Clear deadfall off of roof of Isaac intake building and clear surrounding deadfall from door area.

FIELD TECH: JW SITE REP:  YES /  NO N/A

MATERIALS: IN STOCK  PURCHASED  RECEIPTS:  YES /  NO  
 Chainsaw, ladder, tie down straps

DESCRIPTION OF WORKS COMPLETED: PICTURES:  YES /  NO  
 Safely secure and cut deadfall laying on roof of intake, clear additional surrounding deadfall from entrance of intake.

WORKS COMPLETED:  YES /  NO

ANTICIPATED RETURN DATE: N/A

FUTURE WORKS:  
 Ongoing

MATERIALS REQUIRED: DO PARTS NEED TO BE ORDERED?  YES /  NO  
 Rakes, chainsaw, gloves, ladder

ADDITIONAL NOTES/SKETCHES:



## FIELD WORK MEMO

**DATE:** April 22/24 **TIME:** 2 hrs **VEHICLE:** PERSONAL  COMPANY  **DISTANCE:** N/A  
**PROJECT:** Sutherland access door and ceiling repair **TYPE OF WORKS:** Repair and maintenance  
**WORKS REQUESTED:** Quote for repair of access door to reservoir and ceiling.

**FIELD TECH:** JW **SITE REP:** YES  / NO   
**MATERIALS:** IN STOCK  PURCHASED  **RECEIPTS:** YES  / NO   
 2-2x4 lumber  
 7-2x6 lumber  
 1-2x8 lumber  
 1 set hinges  
 3/4" ply-4'x8'  
 Fram tape

**DESCRIPTION OF WORKS COMPLETED:** **PICTURES:** YES  / NO   
 Remove old access door and remake as per old design- 2"x6" frame c/w plywood lid. Fasten to concrete wall and existing angle iron.  
 Lift existing plywood ceiling and reinforce with 2"x4" supports at front and back, 3/4" plywood strips on sides to support sides.

**WORKS COMPLETED:** YES  / NO

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**ANTICIPATED RETURN DATE:** N/A

**FUTURE WORKS:**  
 N/A

**MATERIALS REQUIRED:** **DO PARTS NEED TO BE ORDERED?** YES  / NO   
 Hand tools, cordless tool kit, silicone/Sicaflex c/w gun, hammer drill, bottle jack.

**ADDITIONAL NOTES/SKETCHES:**  
 Labour to remove and rebuild and repair about 1/2 day for two people.