



Water Local Service Area

Annual Report
2008



Table of Contents

| | | |
|-----|---|---|
| 1. | Introduction..... | 1 |
| 2. | Surfside Water System | 1 |
| 2.1 | Groundwater Wells | 1 |
| 2.2 | Reservoirs..... | 1 |
| 2.3 | Distribution System..... | 1 |
| 3. | Water Sampling and Testing Program..... | 2 |
| 4. | Water Quality - Source Water and Distribution System..... | 2 |
| 5. | Water Quality Inquiries and Complaints | 2 |
| 6. | Groundwater Production and Consumption..... | 3 |
| 7. | Maintenance Program..... | 4 |
| 8. | Water System Projects..... | 4 |
| 8.1 | 2008 Completed Studies Projects..... | 4 |
| 8.2 | 2009 Proposed Projects & Upgrades | 4 |
| 8.3 | 2009 Proposed Studies..... | 4 |
| 9. | Emergency Response Plan..... | 5 |
| 10. | Cross Connection Control..... | 5 |
| 11. | Closing..... | 5 |
| | Appendix A - Map of Surfside Water Local Service Area | |
| | Appendix B - Water Quality Testing Results | |
| | Appendix C - Emergency Response Plan | |

1. Introduction

The following annual report describes the Surfside Water Local Service Area and summarizes the water quality and production data from 2008. This report also includes a summary of inquiries and complaints, completed and proposed maintenance activities, the Emergency Response Plan, and the Cross Connection Control Program.

This report is to be submitted to the Vancouver Island Health Authority by the Spring of 2009.

2. Surfside Water System

The Surfside Water Service Area was established in 1986 and comprises an area northwest of Qualicum Beach on Surfside Drive and part of McFeely Drive. The water source for the Surfside Water Service Area comes from two groundwater wells located nearby. The water source is not chlorinated and is not stored in a reservoir, but is pumped into the system via two pressure tanks. A map of the Surfside Water System is provided in Appendix A for reference.

2.1 Groundwater Wells

Two groundwater production wells are present in the well field at 3547 West Island Highway, north of Qualicum Beach, B.C.

| Well / Name | Well Depth | Wellhead Protection | Treated/Untreated with Chlorine |
|-------------|------------|---------------------|---------------------------------|
| #1 | 9.4 m | Yes | Untreated |
| #2 | 9.8 m | Yes | Untreated |

An emergency back-up chlorination station is present inside the pumphouse, should it be required.

2.2 Reservoirs

There is no reservoir in the Surfside Water System. Water supply is pumped into the system via a dual pressure tank arrangement.

2.3 Distribution System

The water distribution system in Surfside is largely comprised of 100mm and 150mm asbestos-concrete watermains, and 200mm PVC watermains. Flushouts are present, but there are no fire hydrants on the system.

3. Water Sampling and Testing Program

Water sampling and testing is carried out weekly in the distribution system. The following table includes a summary of all testing:

| Timing | Location | Tests |
|--------------------------------------|---------------------------|--|
| Weekly | RDN (in-house) Laboratory | Total coliforms, E.Coli Temperature, pH, Conductivity Chlorine residual, Salinity Total Dissolved Solids Iron, Manganese |
| Weekly (Health Dept. Requirement) | North Island Labs | Total, Fecal coliforms |
| Monthly | North Island Labs | Chloride |
| Quarterly | North Island Labs | Sodium, Chloride, Conductivity Total Dissolved Solids |
| Annual Source Water Testing | North Island Labs | Complete potability testing of each well |
| Annual System Water Testing | North Island Labs | Complete potability testing of distribution system |

4. Water Quality - Source Water and Distribution System

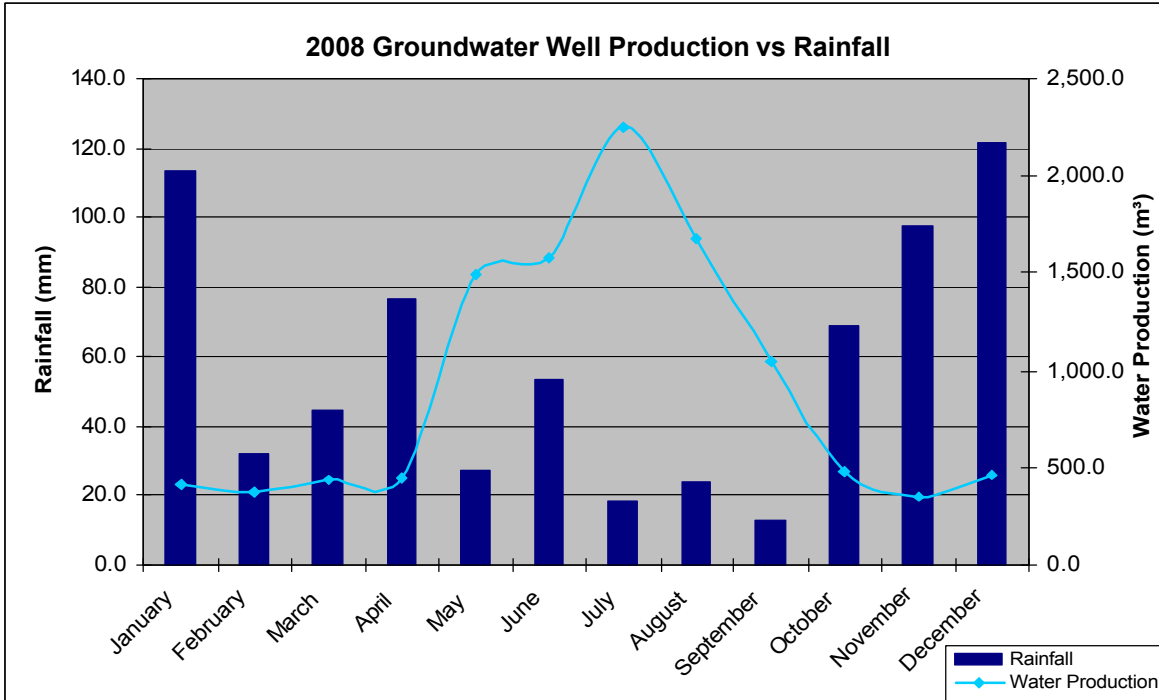
Up-to-date water quality reports and lab data are posted monthly on the RDN website at www.rdn.bc.ca in the WaterSmart section, under “Communities”. Tables of water quality testing results for both the source water and distribution system are provided at the end of this report under Appendix B.

5. Water Quality Inquiries and Complaints

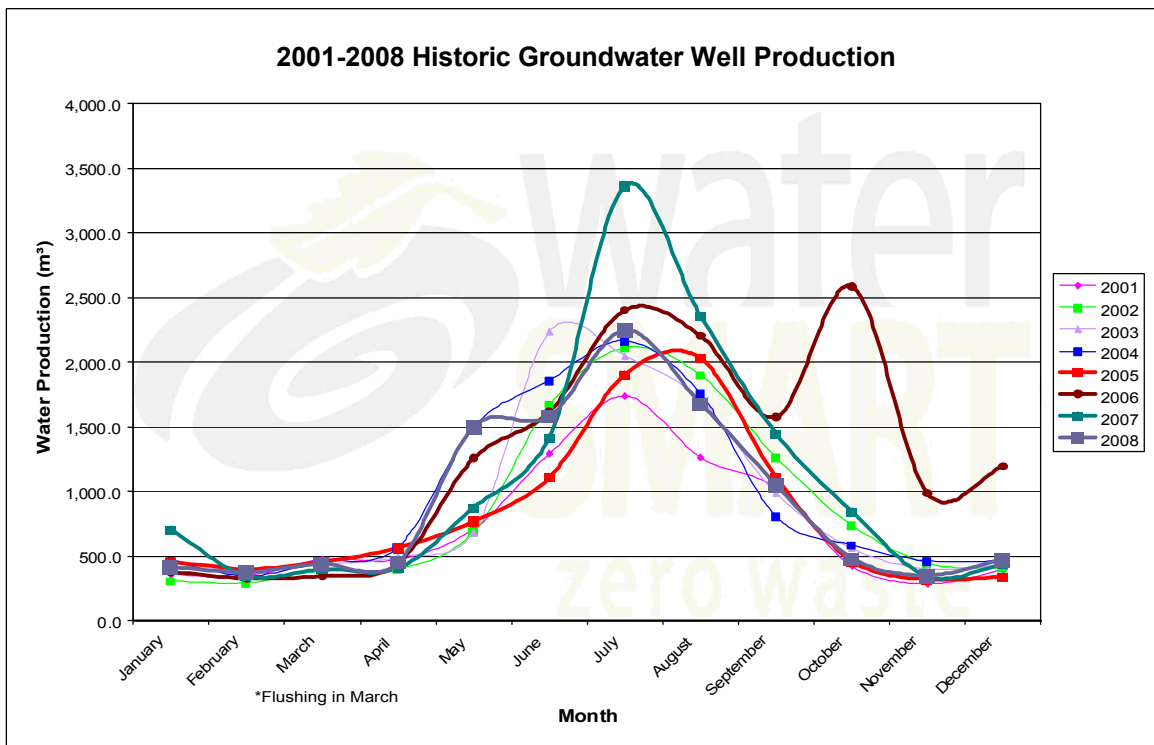
Very few complaints and inquiries were received from the Surfside water service area, and were typically related to interruption of supply (power outages).

6. Groundwater Production and Consumption

The 2008 monthly groundwater production for Surfside is shown in the chart below. There are 38 water service connections in Surfside. Groundwater production has been charted against rainfall data from the City of Parksville website to show the correlation between rainfall and water consumption.



The monthly groundwater production for Surfside for the past 8 years is shown in the chart below. Groundwater production in 2008 was average in comparison to previous years.



Consumption

In the Fall/Winter of 2008, the average usage per home in Surfside was 0.53 cubic metres per day (117 imperial gallons). In the summer, the average water usage was 1.42 cubic metres per day (312 imperial gallons). Based on these figures, the annual consumption per capita is estimated to be 354 L/day. This consumption is 18.6% more than the RDN system average of 298.4 L/day/capita for 2008.

7. Maintenance Program

Regular maintenance and inspections are completed around the wellhead areas to reduce or eliminate the risk of contamination and system failure. Watermains are flushed once annually; in the Spring. There are no fire hydrants in this water system due to insufficient supply and capacity for fire flows.

8. Water System Projects

8.1 2008 Completed Studies Projects

- Replaced all facility signs.
- Began keyless door entry installation (card lock) at the Water Services field office, and all pumphouse sites.
- Re-keyed all gates and points of entry.
- Established electrical connections for the mobile generator at key sites.
- Completed annual watermain flushing.
- Completed a comprehensive water conservation program (**Team WaterSmart**) from May to October.
- Updated and improved the RDN **WaterSmart** website.
- Updated the Emergency Response Plan.
- Expanded the Operating Procedures binder.
- Completed the SCADA (Supervisory Control and Data Acquisition) Study.
- Completed the Innovative Water Supply and Re-Use study.
- Completed the *Action for Water* referendum process.
- Achieved Backflow Prevention Tester's Certification for 3 Operations staff.
- Created the Auto E-Message notification sign-up on the RDN website.

8.2 2009 Proposed Projects & Upgrades

- Install a stand-alone water sampling station.
- Install a permanent stand-by generator.
- Establish the Drinking Water Protection Advisory Committee.
- Review the SCADA report and options for implementation.
- Purchase well sequencing controllers.
- Complete the keyless door entry installations at all field sites.
- Commence the 2009 **Team WaterSmart** education program.
- Develop a rebate / incentive program.
- Develop the *Well Aware* well safety program.

8.3 2009 Proposed Studies

- Complete the well re-development study.

9. Emergency Response Plan

The Emergency Response Plan (ERP) was reviewed and updated in 2008. A copy of the ERP is attached in Appendix C.

10. Cross Connection Control

A formalized Cross Connection Control Program was initiated in 2007. Cross connection controls in-place include dual check valves at each service connection, fire hydrant use permits, and water supply bylaws noting discontinued service if a threat to the water supply is perceived by staff.

In 2008, a review and comparison of successful cross-connection control programs in other small water systems nearby was undertaken. A database of commercial customers was set-up in order to keep track of the maintenance history of testable backflow prevention assemblies at each site. Three RDN Operations staff achieved Backflow Prevention Tester's certification.

The program in 2009 will include:

- A survey of existing and potential cross-connections,
- An audit of RDN-owned facilities in each water service area,
- The preparation of a draft bylaw to allow enforcement of the Cross Connection Control Program.

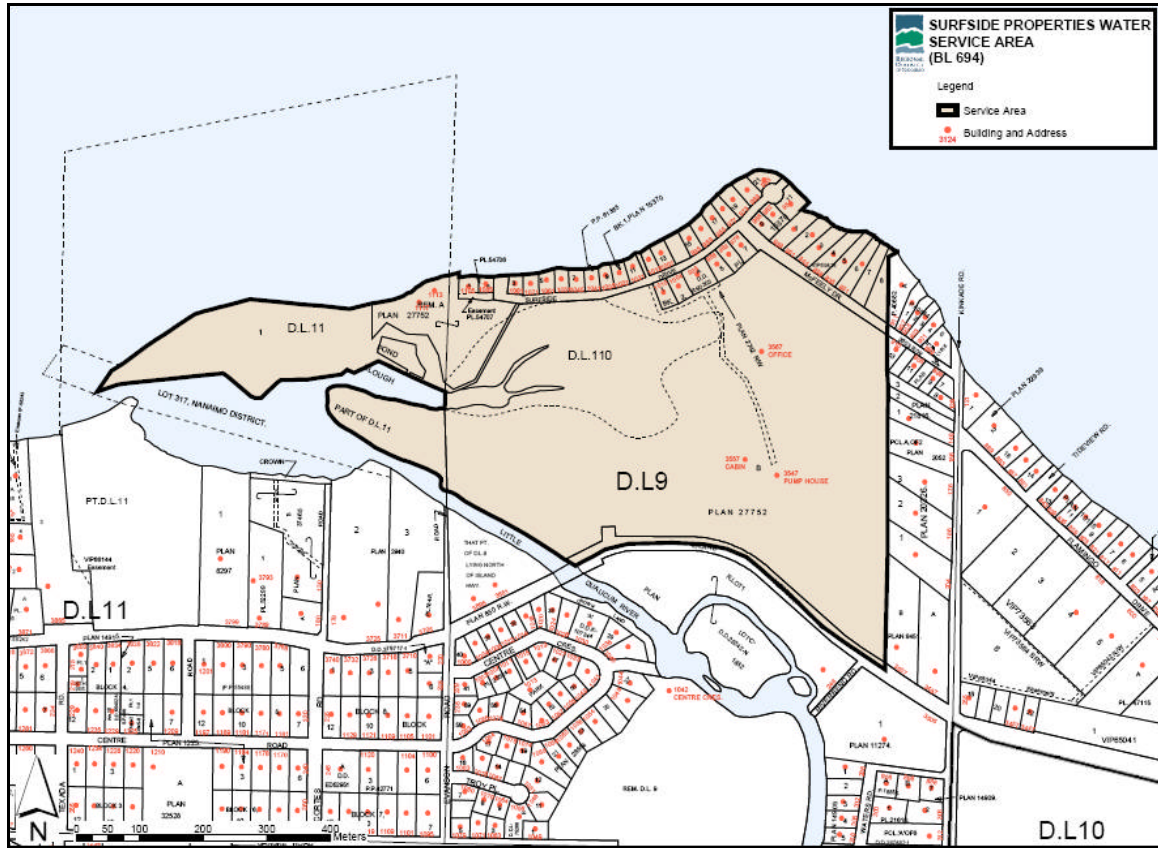
11. Closing

An annual report for the year 2009 will be prepared and submitted to the Vancouver Island Health Authority in the Spring of 2010. Annual reports are also available on our website at www.rdn.bc.ca in the WaterSmart section, under "Communities".

APPENIDX A

**MAP OF SURFSIDE
WATER LOCAL SERVICE AREA**

SURFSIDE WATER LOCAL SERVICE AREA



APPENDIX B

WATER QUALITY TESTING RESULTS

Distribution Potability Test Results - Surfside (Treated Drinking Water)

| Test | Water Quality Guidelines | | | | Date | | | | | | | | | |
|-------------------|--------------------------|---------|---------|-----------|------|-------|--------|--------|----------|----------|----------|----------------|----------------|----------------|
| | Units | CDWG | BCAWQG | | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | May 17 2006 | May 22 2007 | May 26 2008 |
| Color | CU | 15 | <=15 | AO | | 15 | 3 | 2 | 2 | 5 | <5 | <5 | 8 | <5 |
| Conductivity | uS | | 700 | MAC | | 291 | 137 | 128 | 175 | 159 | 163.1 | 148.3 | 163.7 | 151 |
| TDS | mg/L | 500 | <=500 | AO | | 211 | 87 | 53 | 53 | 93 | 53 | 93 | 86 | 104 |
| Hardness (CaCO3) | mg/L | 80-100 | <=500 | AO | | 88 | 55.3 | 55.2 | 58.4 | 64 | 68 | 58 | 73 | 53 |
| pH | pH units | 6.5-8.5 | 6.5-8.5 | AO | | 7.35 | 6.8 | 6.39 | 6.8 | 6.8 | 6.7 | 6.8 | 6.7 | 6.96 |
| Turbidity | NTU's | 5 | 1 | MAC | | 1.1 | <.05 | 0.43 | 0.06 | 0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Alkalinity | mg/L | | | | | 151 | 47 | 47 | 23 | 53 | 59 | 53 | 53 | 49 |
| Chloride | mg/L | 250 | <=250 | AO | | 12.5 | 7.3 | 6.41 | 7.58 | 7.9 | 9.3 | 6.8 | 10.5 | 8.5 |
| Fluoride | mg/L | 1.5 | 1.5 | MAC | | 0.12 | <.04 | 0.07 | <0.01 | <1 | <1.0 | <0.1 | <1.0 | <1.0 |
| Sulfate | mg/L | 500 | <=500 | AO | | 0.5 | 3.97 | 4.08 | 4.86 | 17.4 | 6.4 | 7.3 | 8.1 | 6.1 |
| Nitrate | mg/L | 10 | 10 | MAC | | 0.33 | 0.459 | 0.46 | 0.52 | 0.6 | 0.6 | 0.54 | 0.4 | 0.6 |
| Nitrite | mg/L | 1 | | | | 0.068 | <.002 | <.006 | <0.01 | <0.1 | <0.1 | <0.01 | <0.1 | <0.1 |
| T-Aluminum | mg/L | | 0.2 | MAC | | | 0.031 | <.009 | <0.005 | <0.005 | <0.005 | <0.005 | <0.01 | <0.05 |
| T-Antimony | mg/L | | 0.006 | MAC | | | <.006 | <.006 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0004 | <0.001 |
| T-Arsenic | mg/L | 0.025 | 0.025 | IMAC | | 0.001 | <.01 | <.01 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0004 | <0.001 |
| T-Barium | mg/L | 1.0 | 1 | MAC | | 0.005 | 0.0448 | 0.0004 | 0.002 | 0.002 | 0.002 | 0.002 | <0.002 | <0.005 |
| T-Boron | mg/L | 5.0 | 5 | MAC | | 0.1 | 0.021 | 0.02 | 0.022 | 0.02 | 0.022 | 0.016 | 0.022 | <0.02 |
| T-Cadmium | mg/L | 0.005 | | | | | <.0006 | <.0006 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00002 | <0.0003 |
| T-Calcium | mg/L | | | | | | 18 | 16.7 | 18.8 | 21 | 21.7 | 18.9 | 23.5 | 17.1 |
| T-Chromium | mg/L | 0.05 | 0.05 | MAC | | | <.0009 | <.0009 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.001 | <0.003 |
| T-Copper | mg/L | 1.0 | <=1 | MAC | | | 0.016 | 0.014 | 0.013 | 0.014 | 0.013 | 0.011 | 0.01 | 0.02 |
| T-Iron | mg/L | 0.3 | <=0.3 | AO | | 0.17 | 0.031 | 0.109 | <0.1 | <.01 | <.01 | <.01 | <0.2 | 0.06 |
| T-Lead | mg/L | 0.01 | 0.01 | MAC | | | <.002 | 0.003 | 0.0003 | 0.0002 | 0.0003 | 0.0002 | 0.0004 | <0.0005 |
| T-Magnesium | mg/L | | <=700 | AO | | 9.24 | 2.53 | 3.29 | 2.8 | 3 | 3.4 | 2.7 | 3.4 | 2.6 |
| T-Manganese | mg/L | 0.05 | <=0.05 | AO | | 0.11 | 0.0006 | 0.0018 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.002 |
| T-Mercury | mg/L | 0.001 | 0.001 | MAC | | | <.0001 | <.0001 | <0.0002 | <0.0002 | <0.0002 | <0.0001 | <0.02 | <0.01 |
| T-Potassium | mg/L | | | | | | <.4 | <.4 | <0.4 | <0.4 | <0.4 | <0.4 | <0.8 | 0.3 |
| T-Selenium | mg/L | 0.01 | 0.01 | MAC | | | 0.007 | <.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0004 | <0.003 |
| T-Sodium | mg/L | 200 | <=200 | AO | | | 3.6 | 4.4 | 4.4 | 4.5 | 5.3 | 5.5 | 6.6 | 6.5 |
| T-Uranium | mg/L | 0.1 | 0.1 | MAC | | | <.06 | <.02 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.001 | <0.002 |
| T-Zinc | mg/L | 5 | <5 | AO | | 0.009 | 0.009 | 0.0211 | 0.004 | 0.003 | 0.003 | 0.004 | 0.027 | <0.005 |
| Total Coliform | cfu/100ml | <1 | <1 | cfu/100ml | | <1 | <1 | n/a | n/a | <1 | <1 | <1 | <1 | <1.0 |
| Fecal Coliform | cfu/100ml | <1 | <1 | cfu/100ml | | <1 | <1 | n/a | n/a | <1 | <1 | <1 | <1 | |
| E.coli | cfu/100ml | <1 | <1 | cfu/100ml | | | | | | | <1 | <1 | <1 | <1.0 |
| Tannins & Lignins | | | | | | n/a | n/a | <.1 | n/a | n/a | n/a | n/a | n/a | n/a |
| Trihalomethanes | mg/l | 0.1 | | MAC | | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |

BCAWQG - BC approved water quality guidelines

MAC - maximum acceptable concentrations

IMAC - interim maximum acceptable concentrations

AO - aesthetic objective

Red font indicates non-compliance.

Surfside Well #1 Water Analysis Results

Canadian Drinking Water Guidelines Package

Red font indicates non-compliance with Canadian Drinking Water Guidelines

MAC=Maximum Acceptable Concentration.

IMAC= Interim Maximum Acceptable Concentration.

AO= Asthetic Objective.

| Parameter | Units | CDWG | BCAWQG | | 2002 | 2003 | 2004 | 2005 | Oct 24 2006 | Oct 22 2007 | Oct 8 2008 |
|------------------------|-----------|---------|---------|-----------|----------|----------|----------|----------|-------------|-------------|------------|
| Color | CU | 15 | <=15 | AO | 2 | <5 | <5 | <5 | <5 | 5 | <5 |
| Conductivity | µS | | 700 | MAC | 150 | 190.9 | 309 | 168.8 | 381 | 148.2 | 198.5 |
| Total Dissolved Solids | mg/L | 500 | <=500 | AO | 53 | 100 | 170 | 122 | 220 | 96 | 154 |
| Hardness (CaCO3) | mg/L | 80-100 | <=500 | AO | 53.1 | 77 | 120 | 68 | 130 | 56 | 82 |
| pH | pH units | 6.5-8.5 | 6.5-8.5 | AO | 6.69 | 6.75 | 6.7 | 7.1 | 6.7 | 6.83 | 6.7 |
| Turbidity | NTU's | 5 | 1 | MAC | <0.05 | 0.43 | <0.5 | 0.7 | <0.5 | <0.5 | <0.5 |
| Alkalinity | mg/L | | | | 46 | 51 | 45 | 50 | 43 | 50 | 50 |
| Chloride | mg/L | 250 | <=250 | AO | 7.06 | 20.9 | 66.3 | 14.9 | 72.4 | 7.8 | 30.9 |
| Fluoride | mg/L | 1.5 | 1.5 | MAC | 0.05 | <0.6 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Sulfate | mg/L | 500 | <=500 | AO | 4.21 | 7.7 | 9.2 | 6.4 | 10.8 | 8.3 | 7.6 |
| Nitrate (N) | mg/L | 10 | 10 | MAC | 0.35 | 0.5 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 |
| Nitrite (N) | mg/L | 1 | | | <0.01 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| T-Aluminum | mg/L | | 0.2 | MAC | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.006 |
| T-Antimony | mg/L | | 0.006 | MAC | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 0.0002 | <0.0002 | <0.0002 |
| T-Arsenic | mg/L | 0.025 | 0.025 | IMAC | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| T-Barium | mg/L | 1.0 | 1 | MAC | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 | <0.001 |
| T-Boron | mg/L | 5.0 | 5 | MAC | 0.014 | 0.017 | 0.021 | 0.018 | 0.019 | 0.018 | 0.017 |
| T-Cadmium | mg/L | 0.005 | | | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 |
| T-Calcium | mg/L | | | | 16 | 23.2 | 34.7 | 20.7 | 39.5 | 17.1 | 24.7 |
| T-Chromium | mg/L | 0.05 | 0.05 | MAC | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0004 |
| T-Copper | mg/L | 1.0 | <=1 | MAC | 0.007 | 0.006 | 0.007 | 0.011 | 0.004 | 0.007 | 0.016 |
| T-Iron | mg/L | 0.3 | <=0.3 | AO | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.08 |
| T-Lead | mg/L | 0.01 | 0.01 | MAC | 0.0007 | 0.0006 | 0.0004 | 0.0004 | 0.0003 | 0.0003 | 0.0007 |
| T-Magnesium | mg/L | | <=700 | AO | 3.2 | 4.7 | 6.8 | 3.9 | 7.5 | 3.3 | 5.01 |
| T-Manganese | mg/L | 0.05 | <=0.05 | AO | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | 0.0007 |
| T-Mercury | mg/L | 0.001 | 0.001 | MAC | <0.0002 | <0.0002 | <0.0002 | <0.0001 | <0.0001 | <0.0001 | <0.01 |
| T-Potassium | mg/L | | | | <0.4 | 0.4 | 0.6 | 0.5 | 0.5 | <0.4 | 0.4 |
| T-Selenium | mg/L | 0.01 | 0.01 | MAC | <0.0002 | <0.0002 | 0.0003 | <0.0002 | <0.0002 | 0.0003 | <0.0006 |
| T-Sodium | mg/L | 200 | <=200 | AO | 3.8 | 4.9 | 8.1 | 6.3 | 12.9 | 5.7 | 8.35 |
| T-Uranium | mg/L | 0.1 | 0.1 | MAC | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0004 |
| T-Zinc | mg/L | 5 | <5 | AO | 0.037 | 0.012 | 0.012 | 0.005 | 0.007 | 0.004 | 0.009 |
| Total Coliform | cfu/100ml | <1 | <1 | cfu/100ml | | | <1 | *16 | *1 | <1 | *12.4 |
| Fecal Coliform | cfu/100ml | <1 | <1 | cfu/100ml | | | <1 | <1 | <1 | <1 | <1 |
| E.coli | cfu/100ml | <1 | <1 | cfu/100ml | | | | | <1 | <1 | <1 |

Note: Total coliforms can be an indicator of adverse water quality if the result in the re-sample is confirmed positive. (United States Environmental Protection Agency (EPA), 2008) RDN Water samples are always tested for Fecal coliform bacteria at the same time as Total coliforms to rule out the presence of harmful pathogens.

*Resampled and had <1 for all Coliforms

Surfside Well #2 Water Analysis Results

Canadian Drinking Water Guidelines Package

Red font indicates non-compliance with Canadian Drinking Water Guidelines

MAC=Maximum Acceptable Concentration.

IMAC= Interim Maximum Acceptable Concentration.

AO= Asthetic Objective.

| Parameter | Units | CDWG | BCAWQG | | 2002 | 2003 | 2004 | 2005 | Oct 24 2006 | Oct 22 2007 | Oct 8 2008 |
|------------------------|-----------|---------|---------|-----------|-------------|-------------|------------|------------|-------------|-------------|------------|
| Color | CU | 15 | <=15 | AO | 1 | <5 | 70 | 5 | <5 | 10 | <5 |
| Conductivity | µS | | 700 | MAC | 144 | 238 | 312 | 192.5 | 600 | 147.4 | 301 |
| Total Dissolved Solids | mg/L | 500 | <=500 | AO | 60 | 120 | 140 | 88 | 340 | 98 | 226 |
| Hardness (CaCO3) | mg/L | 80-100 | <=500 | AO | 55.7 | 81 | 99 | 69 | 180 | 51 | 100 |
| pH | pH units | 6.5-8.5 | 6.5-8.5 | AO | 6.67 | 6.55 | 6.6 | 7 | 6.7 | 6.75 | 6.6 |
| Turbidity | NTU's | 5 | 1 | MAC | <0.05 | 21.1 | 8.9 | 5 | 5.7 | <0.5 | <0.5 |
| Alkalinity | mg/L | | | | 48 | 46 | 45 | 47 | 40 | 49 | 44 |
| Chloride | mg/L | 250 | <=250 | AO | 9.3 | 32.1 | 61 | 21.6 | 120 | 7.7 | 61.7 |
| Fluoride | mg/L | 1.5 | 1.5 | MAC | 0.05 | <0.6 | <1.0 | <1.0 | <1.0 | <1.0 | <1.0 |
| Sulfate | mg/L | 500 | <=500 | AO | 5.03 | 10.6 | 9.5 | 8.1 | 17.3 | 8.9 | 11.5 |
| Nitrate (N) | mg/L | 10 | 10 | MAC | 0.34 | 0.4 | 0.4 | 0.4 | 0.3 | 0.4 | 0.4 |
| Nitrite (N) | mg/L | 1 | | | <0.01 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| T-Aluminum | mg/L | | 0.2 | MAC | <0.005 | <0.005 | 0.007 | <0.005 | <0.005 | <0.005 | 0.005 |
| T-Antimony | mg/L | | 0.006 | MAC | <0.0002 | <0.0002 | <0.0002 | <0.0002 | 0.0002 | <0.0002 | <0.0002 |
| T-Arsenic | mg/L | 0.025 | 0.025 | IMAC | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 | <0.0002 |
| T-Barium | mg/L | 1.0 | 1 | MAC | <0.001 | <0.001 | 0.001 | <0.001 | 0.002 | <0.001 | 0.001 |
| T-Boron | mg/L | 5.0 | 5 | MAC | 0.013 | 0.017 | 0.02 | 0.019 | 0.024 | 0.016 | 0.019 |
| T-Cadmium | mg/L | 0.005 | | | <0.00001 | 0.0001 | <0.00001 | <0.00001 | <0.00001 | <0.00001 | <0.00007 |
| T-Calcium | mg/L | | | | 16.7 | 24.4 | 30.4 | 21.5 | 55.8 | 15.7 | 31.7 |
| T-Chromium | mg/L | 0.05 | 0.05 | MAC | <0.0005 | <0.0005 | 0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0004 |
| T-Copper | mg/L | 1.0 | <=1 | MAC | 0.008 | 0.009 | 0.017 | 0.004 | 0.003 | 0.005 | 0.01 |
| T-Iron | mg/L | 0.3 | <=0.3 | AO | <0.1 | 2.9 | 2.2 | 0.5 | 0.4 | <0.1 | 0.06 |
| T-Lead | mg/L | 0.01 | 0.01 | MAC | 0.0007 | 0.0014 | 0.0027 | 0.0005 | 0.0002 | 0.0002 | 0.0005 |
| T-Magnesium | mg/L | | <=700 | AO | 3.4 | 4.9 | 5.7 | 3.8 | 10.6 | 2.9 | 6.12 |
| T-Manganese | mg/L | 0.05 | <=0.05 | AO | <0.005 | 0.013 | 0.026 | 0.006 | 0.008 | <0.005 | 0.0013 |
| T-Mercury | mg/L | 0.001 | 0.001 | MAC | <0.0002 | <0.0002 | <0.0002 | <0.0001 | <0.0001 | <0.0001 | <0.01 |
| T-Potassium | mg/L | | | | <0.4 | 0.4 | 0.5 | 0.4 | 0.8 | <0.4 | 0.5 |
| T-Selenium | mg/L | 0.01 | 0.01 | MAC | <0.0002 | <0.0002 | 0.0003 | 0.0004 | <0.0002 | 0.0005 | <0.0006 |
| T-Sodium | mg/L | 200 | <=200 | AO | 4.2 | 8.2 | 10.4 | 9.4 | 32.6 | 7.6 | 17.7 |
| T-Uranium | mg/L | 0.1 | 0.1 | MAC | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0005 | <0.0004 |
| T-Zinc | mg/L | 5 | <5 | AO | 0.023 | 0.009 | 0.019 | 0.005 | 0.007 | 0.008 | 0.01 |
| Total Coliform | cfu/100ml | <1 | <1 | cfu/100ml | | | *1 | <1 | <1 | *OG | <1 |
| Fecal Coliform | cfu/100ml | <1 | <1 | cfu/100ml | | | <1 | <1 | <1 | <1 | <1 |
| E.coli | cfu/100ml | <1 | <1 | cfu/100ml | | | | | <1 | <1 | <1 |

Note: Total coliforms can be an indicator of adverse water quality if the result in the re-sample is confirmed positive. (United States Environmental Protection Agency (EPA), 2008) RDN Water samples are always tested for Fecal coliform bacteria at the same time as Total coliforms to rule out the presence of harmful pathogens.

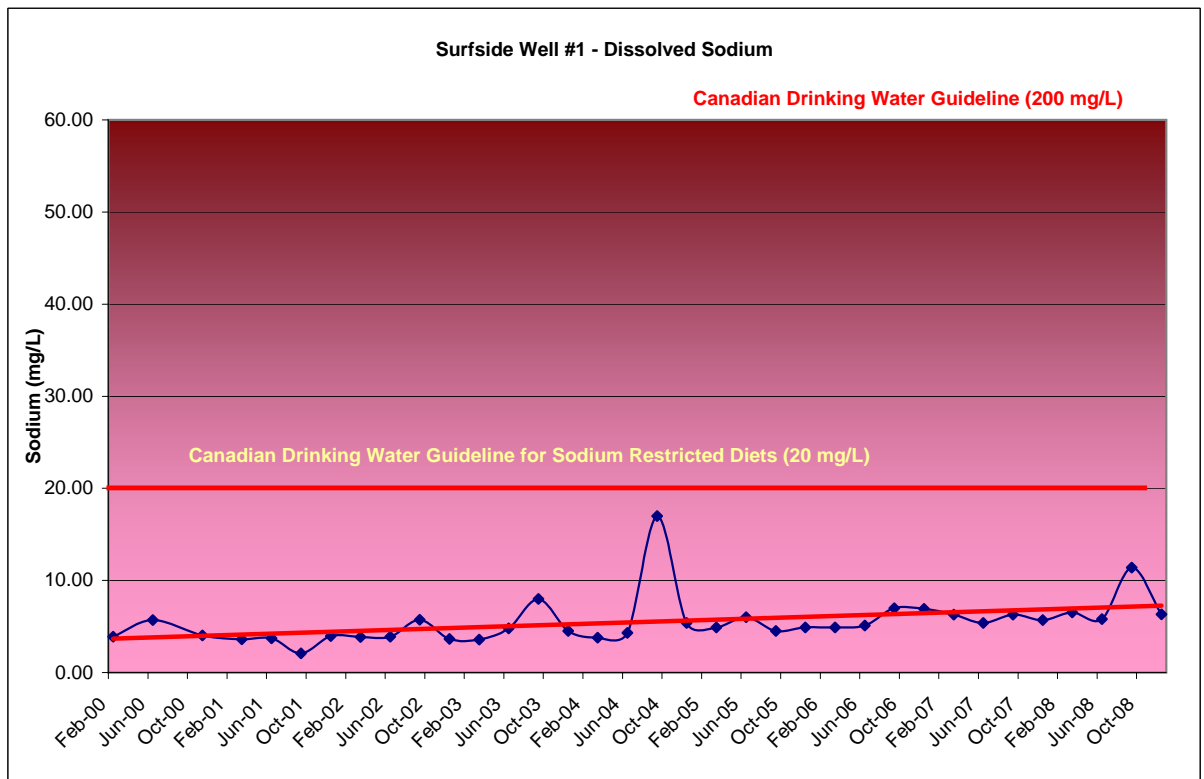
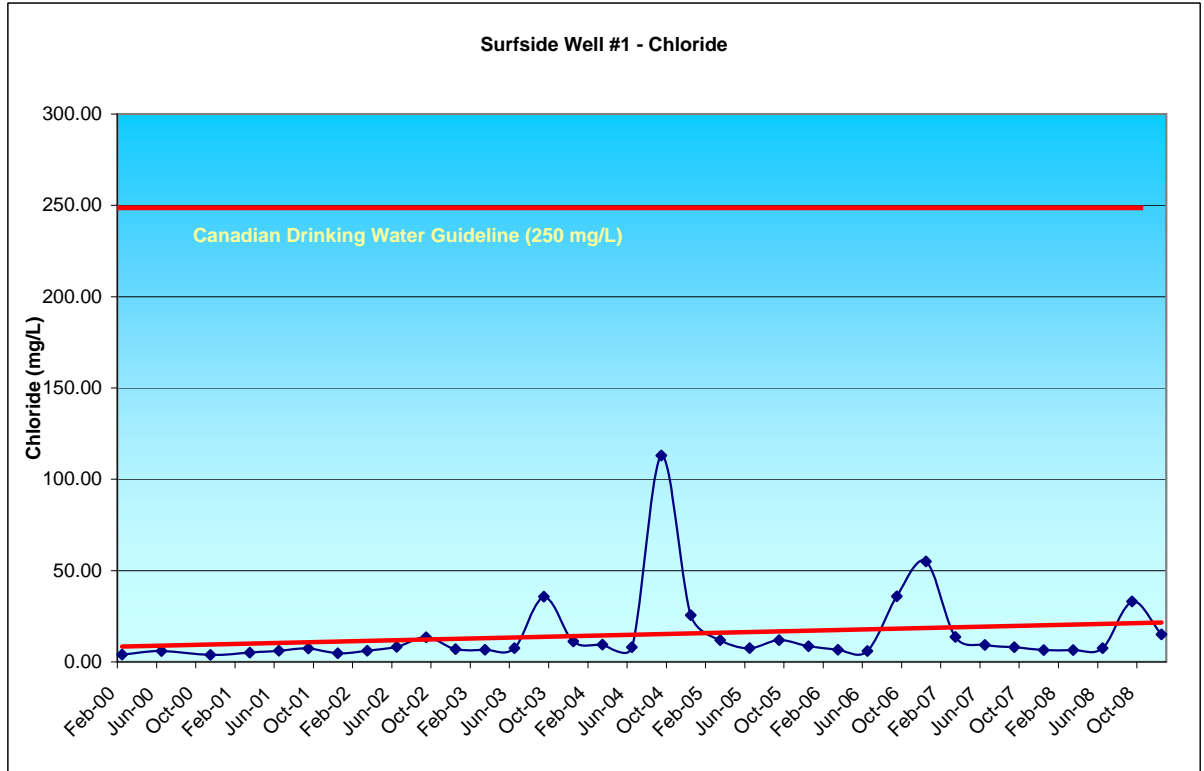
*Resampled and had <1 for all Coliforms

Lab Analysis - Surfside Well #1

Quarterly Chloride - Sodium Comparison

Chloride - CDWG = 250 mg/L
 Diss. Sodium - CDWG = 200 mg/L

| Date | Chloride (mg/L) | Sodium (mg/L) |
|--------|------------------------|---------------|
| Jun-99 | 5.30 | 5.00 |
| Oct-99 | pump out of commission | |
| Feb-00 | 4.10 | 3.90 |
| Jun-00 | 5.90 | 5.70 |
| Nov-00 | 3.81 | 4.04 |
| Mar-01 | 5.13 | 3.61 |
| Jun-01 | 6.16 | 3.71 |
| Sep-01 | 7.33 | 2.09 |
| Dec-01 | 4.76 | 3.97 |
| Mar-02 | 6.16 | 3.86 |
| Jun-02 | 8.23 | 3.90 |
| Sep-02 | 13.55 | 5.72 |
| Dec-02 | 6.96 | 3.65 |
| Mar-03 | 6.59 | 3.58 |
| Jun-03 | 7.50 | 4.80 |
| Sep-03 | 35.70 | 8.00 |
| Dec-03 | 11.20 | 4.50 |
| Mar-04 | 9.50 | 3.80 |
| Jun-04 | 8.10 | 4.30 |
| Sep-04 | 113.00 | 17.00 |
| Dec-04 | 25.60 | 5.40 |
| Mar-05 | 12.00 | 4.90 |
| Jun-05 | 7.60 | 6.00 |
| Sep-05 | 11.90 | 4.50 |
| Dec-05 | 8.50 | 4.90 |
| Mar-06 | 6.60 | 4.90 |
| Jun-06 | 5.90 | 5.10 |
| Sep-06 | 36.00 | 7.00 |
| Dec-06 | 55.00 | 6.90 |
| Mar-07 | 13.60 | 6.30 |
| Jun-07 | 9.30 | 5.40 |
| Sep-07 | 8.10 | 6.30 |
| Dec-07 | 6.40 | 5.70 |
| Mar-08 | 6.50 | 6.54 |
| Jun-08 | 7.50 | 5.80 |
| Sep-08 | 33.10 | 11.40 |
| Dec-08 | 15.1 | 6.34 |

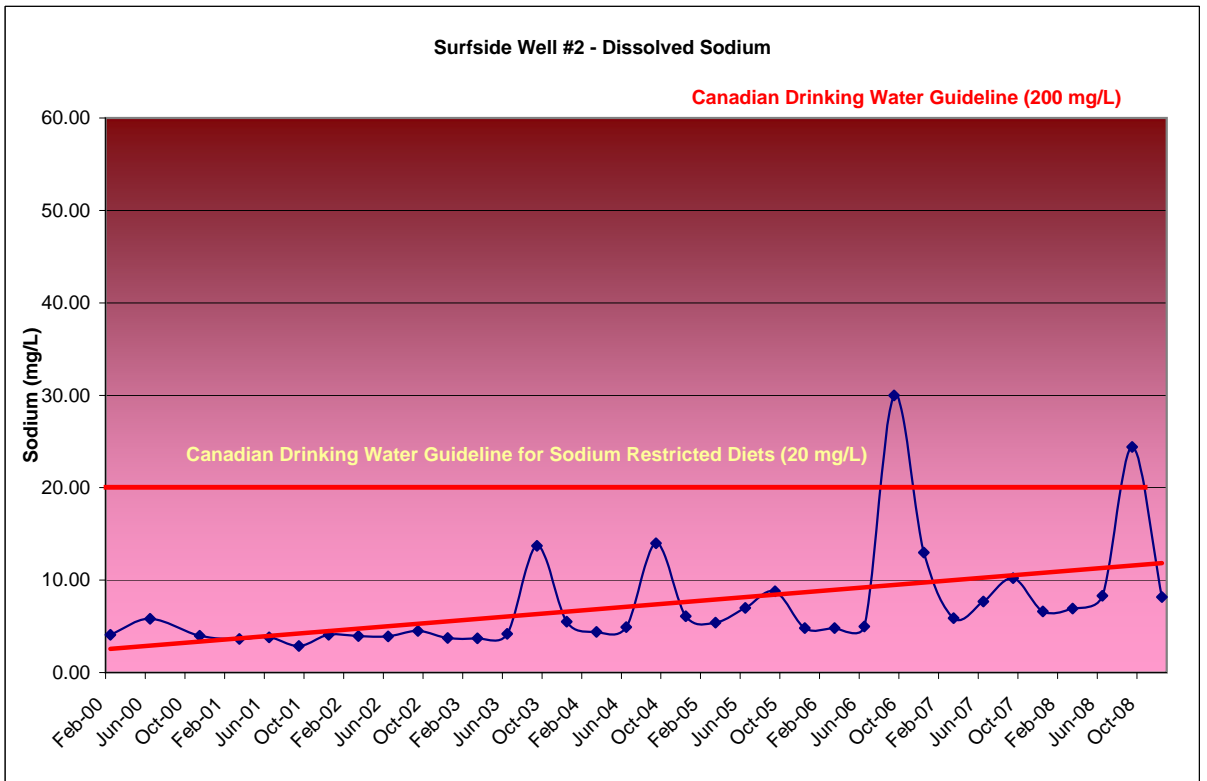
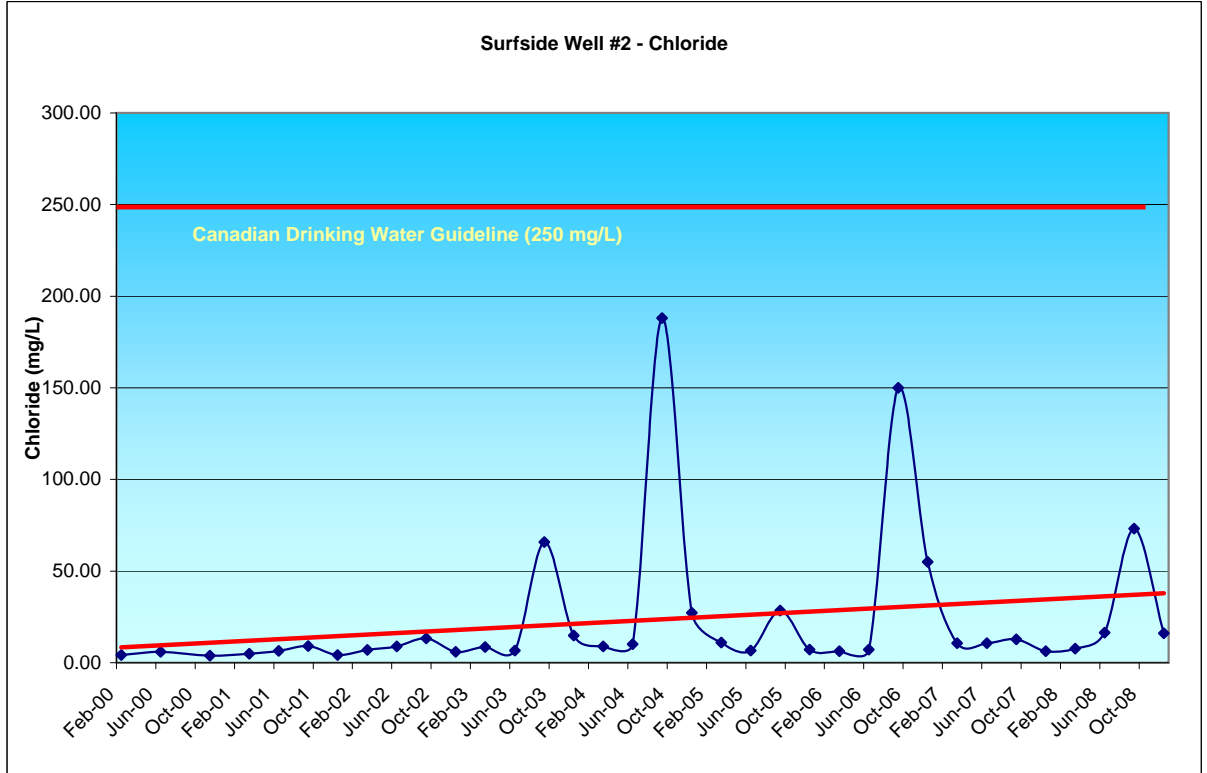


Lab Analysis - Surfside Well #2

Quarterly Chloride - Sodium Comparison

Chloride - CDWG = 250 mg/L
Diss. Sodium - CDWG = 200 mg/L

| Date | Chloride (mg/L) | Sodium (mg/L) |
|--------|-----------------|---------------|
| Jun-99 | 5.30 | 4.10 |
| Oct-99 | 4.40 | 4.60 |
| Feb-00 | 4.20 | 4.10 |
| Jun-00 | 6.00 | 5.80 |
| Nov-00 | 3.76 | 3.99 |
| Mar-01 | 4.88 | 3.63 |
| Jun-01 | 6.47 | 3.81 |
| Sep-01 | 9.05 | 2.88 |
| Dec-01 | 4.24 | 4.07 |
| Mar-02 | 6.93 | 3.96 |
| Jun-02 | 8.82 | 3.92 |
| Sep-02 | 13.30 | 4.50 |
| Dec-02 | 6.01 | 3.73 |
| Mar-03 | 8.52 | 3.71 |
| Jun-03 | 6.70 | 4.20 |
| Sep-03 | 65.80 | 13.70 |
| Dec-03 | 14.90 | 5.50 |
| Mar-04 | 8.90 | 4.40 |
| Jun-04 | 10.10 | 4.90 |
| Sep-04 | 188.00 | 14.00 |
| Dec-04 | 27.30 | 6.10 |
| Mar-05 | 11.00 | 5.40 |
| Jun-05 | 6.60 | 7.00 |
| Sep-05 | 28.50 | 8.80 |
| Dec-05 | 7.2 | 4.8 |
| Mar-06 | 6.30 | 4.80 |
| Jun-06 | 7.10 | 5.00 |
| Sep-06 | 150.00 | 30.00 |
| Dec-06 | 55.00 | 13.00 |
| Mar-07 | 10.70 | 5.90 |
| Jun-07 | 10.70 | 7.70 |
| Sep-07 | 12.70 | 10.20 |
| Dec-07 | 6.3 | 6.6 |
| Mar-08 | 7.70 | 6.91 |
| Jun-08 | 16.50 | 8.30 |
| Sep-08 | 73.20 | 24.40 |
| Dec-08 | 16 | 8.16 |

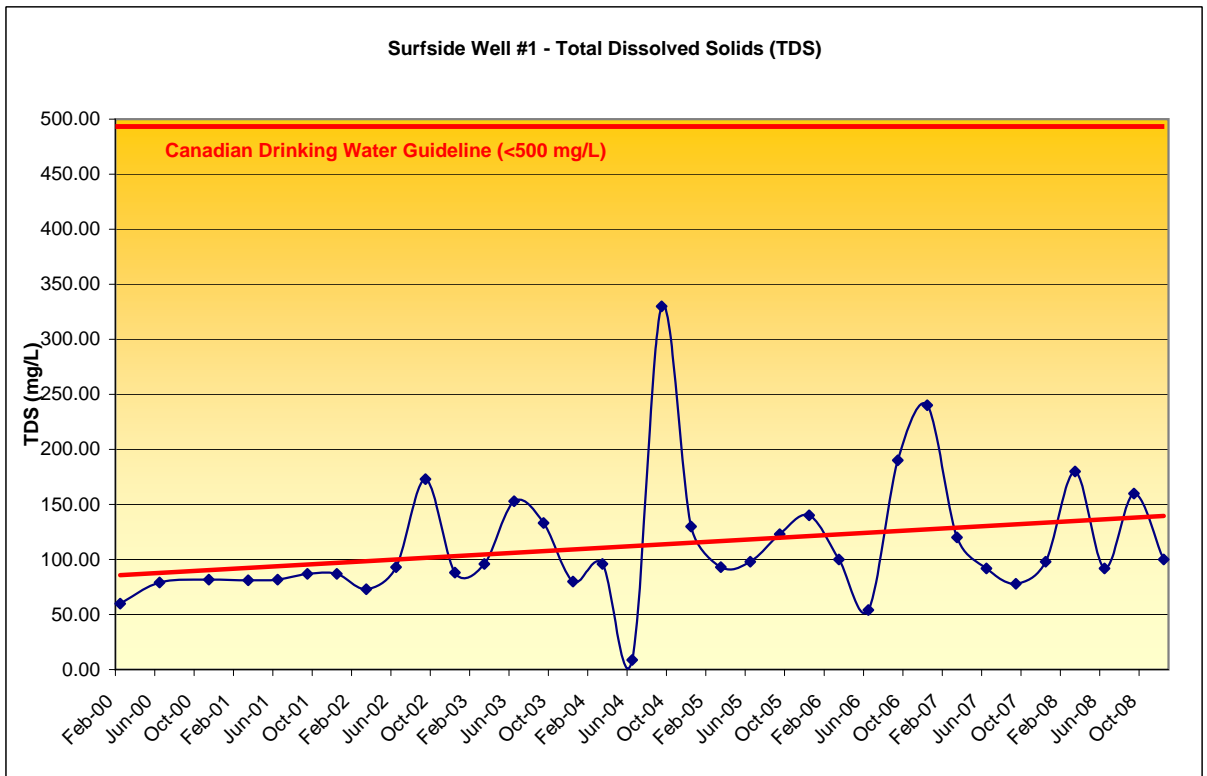
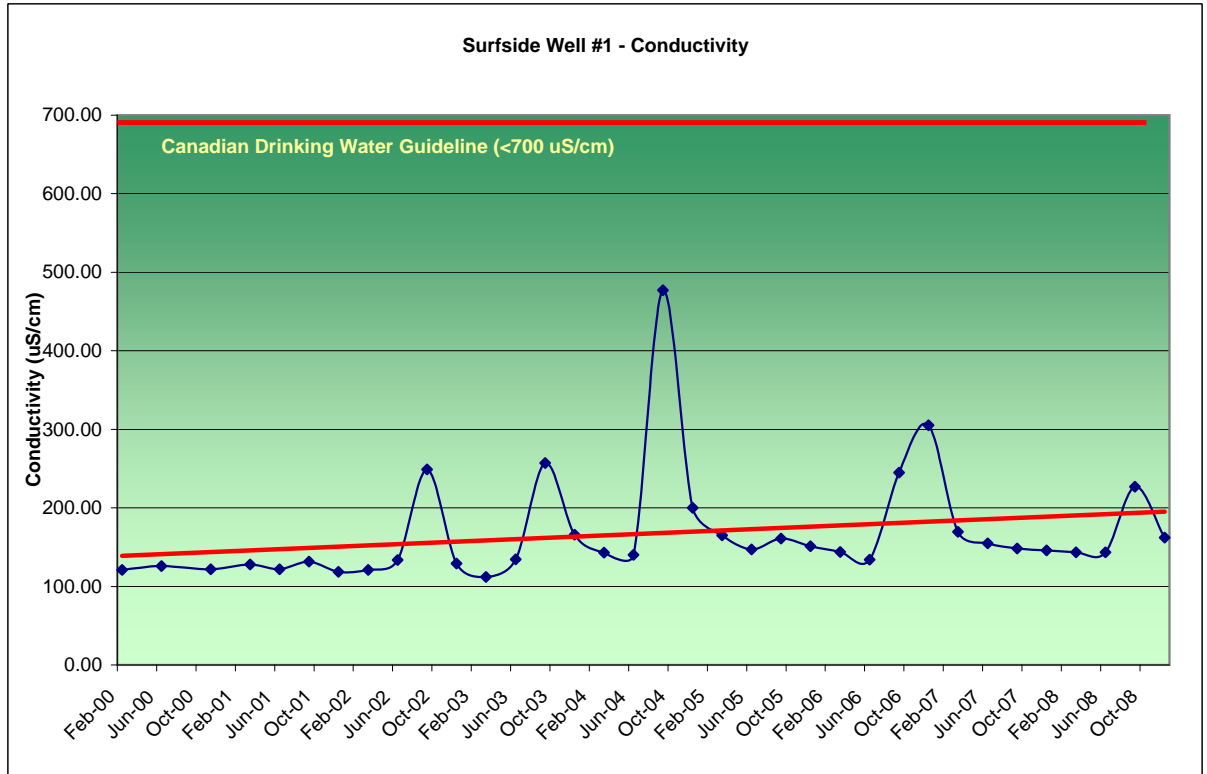


Lab Analysis - Surfside Well #1

Quarterly Conductivity - TDS Comparison

Cond. - CDWG = <700 uS/cm
TDS - CDWG = <500 mg/L

| Date | Cond. (µS) | TDS (mg/L) |
|--------|------------------------|------------|
| Jun-99 | 118.00 | 91.00 |
| Oct-99 | pump out of commission | |
| Feb-00 | 121.00 | 60.00 |
| Jun-00 | 126.00 | 79.00 |
| Nov-00 | 122.00 | 81.70 |
| Mar-01 | 128.00 | 81.00 |
| Jun-01 | 122.00 | 81.70 |
| Sep-01 | 131.60 | 87.00 |
| Dec-01 | 118.70 | 87.00 |
| Mar-02 | 121.00 | 73.00 |
| Jun-02 | 133.50 | 93.00 |
| Sep-02 | 249.00 | 173.00 |
| Dec-02 | 129.00 | 88.00 |
| Mar-03 | 112.00 | 96.00 |
| Jun-03 | 134.60 | 153.00 |
| Sep-03 | 257.00 | 133.00 |
| Dec-03 | 166.00 | 80.00 |
| Mar-04 | 143.00 | 96.00 |
| Jun-04 | 140.00 | 8.700 |
| Sep-04 | 477.00 | 330.00 |
| Dec-04 | 200.00 | 130.00 |
| Mar-05 | 164.90 | 93.00 |
| Jun-05 | 147.00 | 98.00 |
| Sep-05 | 160.80 | 123.00 |
| Dec-05 | 151.00 | 140.00 |
| Mar-06 | 144.00 | 100.00 |
| Jun-06 | 134.10 | 54.00 |
| Sep-06 | 245.00 | 190.00 |
| Dec-06 | 305.00 | 240.00 |
| Mar-07 | 169.60 | 120.00 |
| Jun-07 | 155.00 | 92.00 |
| Sep-07 | 148.30 | 78.00 |
| Dec-07 | 146.00 | 98.00 |
| Mar-08 | 143.40 | 180.00 |
| Jun-08 | 143.40 | 92.00 |
| Sep-08 | 227.00 | 160.00 |
| Dec-08 | 162.00 | 100.00 |

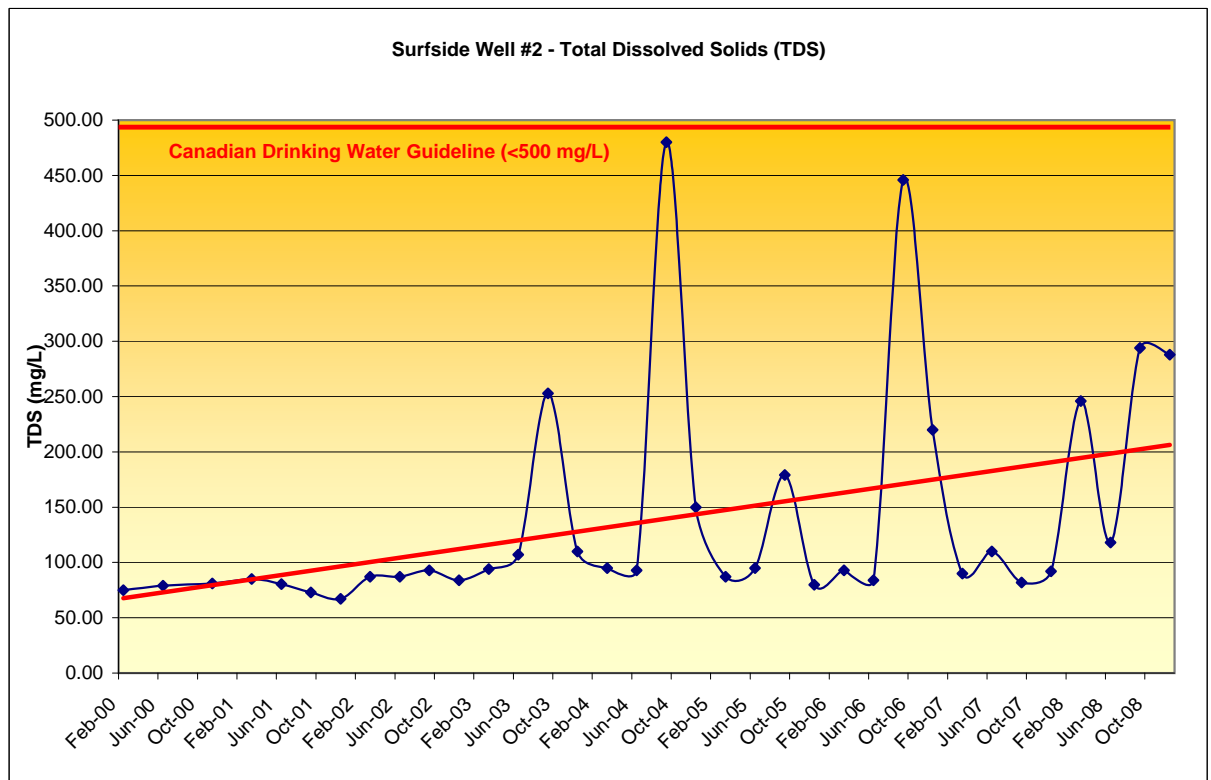
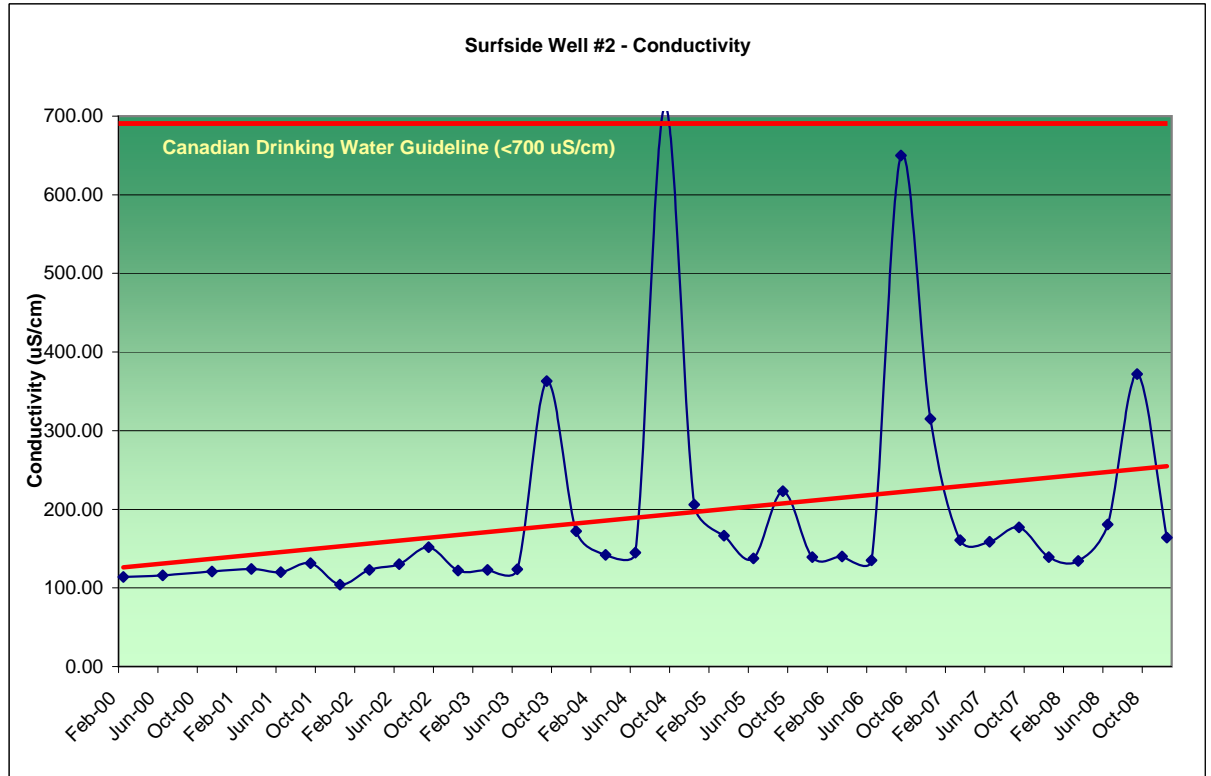


Lab Analysis - Surfside Well #2

Quarterly Conductivity - TDS Comparison

Cond. - CDWG = <700 uS/cm
TDS - CDWG = <500 mg/L

| Date | Cond. (µS) | TDS (mg/L) |
|--------|------------|------------|
| Jun-99 | 115.00 | 91.00 |
| Oct-99 | 114.00 | 75.00 |
| Feb-00 | 114.00 | 75.00 |
| Jun-00 | 116.00 | 79.00 |
| Nov-00 | 121.00 | 81.10 |
| Mar-01 | 124.00 | 85.00 |
| Jun-01 | 120.00 | 80.40 |
| Sep-01 | 131.60 | 73.00 |
| Dec-01 | 104.10 | 67.00 |
| Mar-02 | 123.00 | 87.00 |
| Jun-02 | 130.20 | 87.00 |
| Sep-02 | 152.00 | 93.00 |
| Dec-02 | 122.00 | 84.00 |
| Mar-03 | 123.00 | 94.00 |
| Jun-03 | 123.80 | 107.00 |
| Sep-03 | 363.00 | 253.00 |
| Dec-03 | 172.00 | 110.00 |
| Mar-04 | 142.00 | 95.00 |
| Jun-04 | 145.00 | 93.00 |
| Sep-04 | 713.00 | 480.00 |
| Dec-04 | 206.00 | 150.00 |
| Mar-05 | 166.50 | 87.00 |
| Jun-05 | 137.40 | 95.00 |
| Sep-05 | 223.00 | 179.00 |
| Dec-05 | 139.20 | 80.00 |
| Mar-06 | 139.80 | 93.00 |
| Jun-06 | 135.20 | 84.00 |
| Sep-06 | 650.00 | 446.00 |
| Dec-06 | 315.00 | 220.00 |
| Mar-07 | 160.80 | 90.00 |
| Jun-07 | 158.60 | 110.00 |
| Sep-07 | 177.00 | 82.00 |
| Dec-07 | 139.00 | 92.00 |
| Mar-08 | 134.10 | 246.00 |
| Jun-08 | 180.60 | 118.00 |
| Sep-08 | 372.00 | 294.00 |
| Dec-08 | 164.00 | 288.0 |





Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 08-Jan | 1081 Surfside Dr | 0 | 0 | 0 | 0 | 6 | 6.7 | n/a | 68 | 0.1 | 148.6 | 0.03 | 0.005 |
| 10-Jan | 121 Kinkade | | | | | 7 | 6.7 | n/a | 96 | 0.1 | 206 | | |
| 15-Jan | 965 Surfside Dr | 0 | 0 | 0 | 0 | 6 | 6.9 | n/a | 70 | 0.1 | 150 | | |
| 17-Jan | 121 Kinkade | | | | | 7 | 6.8 | n/a | 96 | 0.1 | 76 | | |
| 22-Jan | 1081 Surfside Dr | | | | | 6 | 6.7 | n/a | 68 | 0.1 | 149 | | |
| 24-Jan | 121 Kinkade | | | | | | | n/a | | | | | |
| | Average | 0 | 0 | 0 | 0 | 6.4 | 6.8 | #DIV/0! | 68.7 | 0.1 | 149.2 | 0.03 | 0.005 |
| | Maximum | 0 | 0 | 0 | 0 | 7 | 6.9 | 0 | 96 | 0.1 | 206 | 0.03 | 0.005 |
| | Minimum | 0 | 0 | 0 | 0 | 6 | 6.7 | 0 | 68 | 0.1 | 76 | 0.03 | 0.005 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| Feb-08 | | | | | | | | | | | | | |
| 05-Feb | 1081 Surfside Dr | 0 | 0 | 0 | 0 | 5 | 6.8 | n/a | 74 | 0.1 | 159 | 0.07 | 0.006 |
| 07-Feb | 121 Kinkade | | | | | 6 | 6.7 | n/a | 97 | 0.1 | 208 | | |
| 12-Feb | 965 Surfside Dr | 0 | 0 | 0 | 0 | 5 | 6.8 | n/a | 69 | 0.1 | 147 | | |
| 20-Feb | 1081 Surfside Dr | | | 0 | 0 | 6 | 6.9 | n/a | 66 | 0.1 | 141 | | |
| 21-Feb | 121 Kinkade | | | | | 7 | 6.8 | n/a | 95 | 0.1 | 201 | | |
| 26-Feb | 965 Surfside Dr | | | 0 | 0 | 7 | 6.8 | n/a | 66 | 0.1 | 141 | | |
| 28-Feb | 121 Kinkade | | | | | 7 | 6.8 | n/a | 93 | 0.1 | 196 | | |
| | Average | 0 | 0 | 0 | 0 | 6.1 | 6.8 | #DIV/0! | 68.8 | 0.1 | 147.0 | 0.07 | 0.006 |
| | Maximum | 0 | 0 | 0 | 0 | 7 | 6.9 | 0 | 97 | 0.1 | 208 | 0.07 | 0.006 |
| | Minimum | 0 | 0 | 0 | 0 | 5 | 6.7 | 0 | 66 | 0.1 | 141 | 0.07 | 0.006 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 04-Mar | 965 Surfside Dr | 0 | 0 | 0 | 0 | 8 | 6.8 | n/a | 64 | 0.1 | 140 | 0.09 | 0.005 |
| 06-Mar | 121 Kinkade | | | | | 8 | 6.8 | n/a | 98 | 0.1 | 206 | | |
| 12-Mar | 1081 Surfside Dr | 0 | 0 | 0 | 0 | 7 | 6.5 | n/a | 66 | 0.1 | 142 | | |
| 13-Mar | 121 Kinkade | | | | | 7 | 6.8 | n/a | 95 | 0.1 | 203 | | |
| 18-Mar | 965 Surfside Dr | | | 0 | 0 | 8 | 6.8 | n/a | 73 | 0.1 | 155 | | |
| 26-Mar | 1081 Surfside Dr | | | | | 8 | 6.8 | n/a | 72 | 0.1 | 152 | | |
| Average | | 0 | 0 | 0 | 0 | 7.7 | 6.8 | #DIV/0! | 78.0 | 0.1 | 166.3 | 0.09 | 0.005 |
| Maximum | | 0 | 0 | 0 | 0 | 8 | 6.8 | 0 | 98 | 0.1 | 206 | 0.09 | 0.005 |
| Minimum | | 0 | 0 | 0 | 0 | 7 | 6.5 | 0 | 64 | 0.1 | 140 | 0.09 | 0.005 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date Apr-08 | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|------------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 02-Apr | 965 Surfside Dr | 0 | 0 | 0 | 0 | 8 | 6.9 | n/a | 69 | 0.1 | 148 | 0.01 | |
| 08-Apr | 1081 Surfside Dr | 0 | 0 | 0 | 0 | 9 | 6.8 | n/a | 69 | 0.1 | 144 | | |
| 10-Apr | 121 Kinkade | | | | | 8 | 6.7 | n/a | 100 | 0.1 | 209 | | |
| 15-Apr | 965 Surfside Dr | | | 0 | 0 | 9 | 6.7 | n/a | 70 | 0.1 | 148 | | 0 |
| 17-Apr | 121 Kinkade | | | | | 10 | 6.8 | n/a | 95 | 0.1 | 201 | | |
| 22-Apr | 1081 Surfside Dr | | | 0 | 0 | 10 | 6.9 | n/a | 69 | 0.1 | 145 | | |
| 24-Apr | 121 Kinkade | | | | | 10 | 6.9 | n/a | 94 | 0.1 | 198 | | |
| | Average | 0 | 0 | 0 | 0 | 9.1 | 6.8 | #DIV/0! | 80.9 | 0.1 | 170.4 | 0.01 | 0 |
| | Maximum | 0 | 0 | 0 | 0 | 10 | 6.9 | 0 | 100 | 0.1 | 209 | 0.01 | 0 |
| | Minimum | 0 | 0 | 0 | 0 | 8 | 6.7 | 0 | 69 | 0.1 | 144 | 0.01 | 0 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 06-May | 1081 Surfside Dr | 0 | 0 | 0 | 0 | 11 | 6.5 | n/a | 69 | 0.1 | 148 | 0.03 | 0.001 |
| 15-May | 121 Kinkade Rd | | | | | 11 | 6.8 | n/a | 90 | 0.1 | 190 | | |
| 21-May | 965 Surfside Dr | 0 | 0 | 0 | 0 | 13 | 6.8 | n/a | 7 | 0.1 | 150 | | |
| 27-May | 1081 Surfside Dr | | | 0 | 0 | 14 | 6.5 | n/a | 68 | 0.1 | 145 | | |
| 29-May | 121 Kinkade Rd | | | | | 14 | 6.7 | n/a | 79 | 0.1 | 181 | | |
| | Average | 0 | 0 | 0 | 0 | 12.6 | 6.7 | #DIV/0! | 62.6 | 0.1 | 162.8 | 0.03 | 0.001 |
| | Maximum | 0 | 0 | 0 | 0 | 14 | 6.8 | 0 | 90 | 0.1 | 190 | 0.03 | 0.001 |
| | Minimum | 0 | 0 | 0 | 0 | 11 | 6.5 | 0 | 7 | 0.1 | 145 | 0.03 | 0.001 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date Jun-08 | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|------------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 04-Jun | 1081 Surfside Dr | 0 | 0 | 0 | 0 | 13 | 6.6 | n/a | 72 | 0.1 | 155 | 0.07 | 0.002 |
| 05-Jun | 121 Kinkade | | | | | 13 | 6.7 | n/a | 93 | 0.1 | 196 | | |
| 11-Jun | 965 Surfside Dr | 0 | 0 | 0 | 0 | 14 | 6.8 | n/a | 78 | 0.1 | 163 | | |
| 17-Jun | 1081 Surfside Dr | | | 0 | 0 | 15 | 6.7 | n/a | 77 | 0.1 | 161 | | |
| 19-Jun | 121 Kinkade | | | | | 15 | 6.7 | n/a | 88 | 0.1 | 185 | | |
| 24-Jun | 965 Surfside Dr | | | 0 | 0 | 18 | 6.6 | n/a | 75 | 0.1 | 158 | | |
| | Average | 0 | 0 | 0 | 0 | 14.7 | 6.7 | #DIV/0! | 80.5 | 0.1 | 169.7 | 0.07 | 0.002 |
| | Maximum | 0 | 0 | 0 | 0 | 18 | 6.8 | 0 | 93 | 0.1 | 196 | 0.07 | 0.002 |
| | Minimum | 0 | 0 | 0 | 0 | 13 | 6.6 | 0 | 72 | 0.1 | 155 | 0.07 | 0.002 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date Jul-08 | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|------------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 02-Jul | 1081 Surfside Dr | 0 | 0 | | | | | n/a | | | | | |
| 09-Jul | 965 Sufside Dr | 0 | 0 | 0 | 0 | 17 | 6.8 | n/a | 92 | 0.1 | 198 | 0.08 | 0.003 |
| 15-Jul | 1081 Surfside Dr | | | 0 | 0 | 17 | 6.8 | n/a | 86 | 0.1 | 186 | | |
| 22-Jul | 965 Sufside Dr | | | 0 | 0 | 18 | 6.7 | n/a | 91 | 0.1 | 192 | | |
| 29-Jul | 1081 Surfside Dr | | | 0 | 0 | 17 | 6.7 | n/a | 89 | 0.1 | 188 | | |
| | Average | 0 | 0 | 0 | 0 | 17.3 | 6.8 | #DIV/0! | 89.5 | 0.1 | 191.0 | 0.08 | 0.003 |
| | Maximum | 0 | 0 | 0 | 0 | 18 | 6.8 | 0 | 92 | 0.1 | 198 | 0.08 | 0.003 |
| | Minimum | 0 | 0 | 0 | 0 | 17 | 6.7 | 0 | 86 | 0.1 | 186 | 0.08 | 0.003 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date Aug-08 | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|------------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 06-Aug | 965 Surfside Dr | 0 | 0 | 0 | 0 | 17 | 6.7 | n/a | 126 | 0.1 | 264 | 0.09 | 0.003 |
| 12-Aug | 1081 Surfside Dr | 0 | 0 | 0 | 0 | 17 | 6.7 | n/a | 120 | 0.1 | 251 | | |
| 19-Aug | 965 Surfside Dr | | | 0 | 0 | 19 | 6.6 | n/a | 135 | 0.1 | 282 | | |
| 26-Aug | 1081 Surfside Dr | | | 0 | 0 | 17 | 6.3 | n/a | 143 | 0.1 | 301 | | |
| | Average | 0 | 0 | 0 | 0 | 17.5 | 6.6 | #DIV/0! | 131.0 | 0.1 | 274.5 | 0.09 | 0.003 |
| | Maximum | 0 | 0 | 0 | 0 | 19 | 6.7 | 0 | 143 | 0.1 | 301 | 0.09 | 0.003 |
| | Minimum | 0 | 0 | 0 | 0 | 17 | 6.3 | 0 | 120 | 0.1 | 251 | 0.09 | 0.003 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date Sep-08 | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|------------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 03-Sep | 1081 Surfside Dr | | | | | | | n/a | | | | | |
| 16-Sep | 1081 Surfside Dr | 0 | 0 | 0 | 0 | 17 | 6.6 | n/a | 141 | 0.1 | 295 | 0.1 | 0.004 |
| 24-Sep | 962 Surfside Dr | 0 | 0 | | | | | n/a | | | | | |
| | Average | 0 | 0 | 0 | 0 | 17.0 | 6.6 | #DIV/0! | 141.0 | 0.1 | 295.0 | 0.10 | 0.004 |
| | Maximum | 0 | 0 | 0 | 0 | 17 | 6.6 | 0 | 141 | 0.1 | 295 | 0.1 | 0.004 |
| | Minimum | 0 | 0 | 0 | 0 | 17 | 6.6 | 0 | 141 | 0.1 | 295 | 0.1 | 0.004 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date Oct-08 | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|------------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 07-Oct | 962 Surfside Dr | 0 | 2 | 0 | 0 | 13 | 6.8 | n/a | 149 | 0.1 | 311 | 0.11 | 0.004 |
| 15-Oct | 1081 Surfside Dr | 0 | 1 | 0 | 0 | 14 | 6.7 | n/a | 104 | 0.1 | 219 | | |
| 21-Oct | 962 Surfside Dr | | | 0 | 0 | 14 | 7 | n/a | 105 | 0.1 | 222 | | |
| 29-Oct | 1081 Surfside Dr | | | 0 | 0 | 13 | 6.6 | n/a | 99 | 0.1 | 207 | | |
| | Average | 0 | 1.5 | 0 | 0 | 13.5 | 6.8 | #DIV/0! | 114.3 | 0.1 | 239.8 | 0.11 | 0.004 |
| | Maximum | 0 | 2 | 0 | 0 | 14 | 7 | 0 | 149 | 0.1 | 311 | 0.11 | 0.004 |
| | Minimum | 0 | 1 | 0 | 0 | 13 | 6.6 | 0 | 99 | 0.1 | 207 | 0.11 | 0.004 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 04-Nov | 962 Surfside Dr | 0 | 0 | 0 | 0 | 12 | 6.8 | n/a | 94 | 0.1 | 198 | 0 | 0.008 |
| 12-Nov | 1081 Surfside Dr | | 2 | 1 | 0 | 12 | 6.8 | n/a | 92 | 0.1 | 195 | | |
| 18-Nov | 962 Surfside Dr | | | 1 | 0 | 12 | 6.5 | n/a | 88 | 0.1 | 187 | | |
| 19-Nov | *1081 Surfside Dr | 0 | 0 | | | | | n/a | | | | | |
| 25-Nov | 1081 Surfside Dr | | | 1 | 0 | 10 | 6.5 | n/a | 87 | 0.1 | 183 | | |
| | Average | 0 | 0.67 | 0.75 | 0 | 11.5 | 6.7 | #DIV/0! | 90.3 | 0.1 | 190.8 | 0.00 | 0.008 |
| | Maximum | 0 | 2 | 1 | 0 | 12 | 6.8 | 0 | 94 | 0.1 | 198 | 0 | 0.008 |
| | Minimum | 0 | 0 | 0 | 0 | 10 | 6.5 | 0 | 87 | 0.1 | 183 | 0 | 0.008 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.

* Health department re-sample



Regional District of Nanaimo - Utilities Department

Surfside Water Analysis - Monthly Report



| Date | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|------------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 02-Dec | 962 Surfside Dr | 0 | 1 | 1 | 0 | 11 | 6.6 | n/a | 81 | 0.1 | 172 | 0.01 | 0 |
| 09-Dec | 1081 Surfside Dr | 0 | 0 | 1 | 0 | 9 | 6.8 | n/a | 86 | 0.1 | 185 | | |
| 16-Dec | 962 Surfside Dr | | | 0 | 0 | | | n/a | | | | | |
| Average | | 0 | 0.5 | 0.67 | 0 | 10.0 | 6.7 | #DIV/0! | 83.5 | 0.1 | 178.5 | 0.01 | 0 |
| Maximum | | 0 | 1 | 1 | 0 | 11 | 6.8 | 0 | 86 | 0.1 | 185 | 0.01 | 0 |
| Minimum | | 0 | 0 | 0 | 0 | 9 | 6.6 | 0 | 81 | 0.1 | 172 | 0.01 | 0 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.

APPENDIX C

EMERGENCY RESPONSE PLAN

* Emergency Response Plan not included in Public Copy.