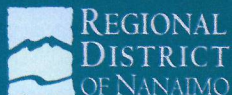




SURFSIDE

Water Service Area Annual Report 2011

Prepared by:



REGIONAL DISTRICT OF NANAIMO
Water Services Department
June 2012



Table of Contents

1.	Introduction.....	1
2.	Surfside Water Service Area.....	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.....	3
8.	Water Service Area Projects.....	3
8.1	2011 Completed Studies & Projects.....	3
8.2	2012 Proposed Projects & Upgrades.....	4
9.	Emergency Response Plan.....	4
10.	Cross Connection Control.....	4
11.	Closing	4

Appendix A - Map of Surfside Water Service Area

Appendix B - Water Quality Testing Results

Appendix C - Emergency Response Plan

1. Introduction

The following annual report describes the Surfside Water Service Area and summarizes the water quality and production data from 2011. 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 2012.

2. Surfside Water Service Area

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. There are 37 water service connections in the Surfside Water Service Area. The water source comes from two groundwater wells located nearby. The water source is chlorinated (as of September 2011) and pumped into the system via two pressure tanks. A back-up generator is present at the pumphouse, should it be required. A map of the Surfside Water Service Area 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 In Place	Treated/Untreated with Chlorine
#1	9.4 m	Yes	Treated
#2	9.8 m	Yes	Treated

2.2 Reservoirs

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

2.3 Distribution System

The water distribution system in Surfside is summarized in the table below. Flushouts are present, but there are no fire hydrants on the system.

Watermain Material	Length of mains in Surfside Water Service Area	Prevalence in Water Service Area
AC: 150mm or smaller AC: 200mm or larger	0.8 km none	72.5% n/a
PVC: 150mm or smaller PVC: 200mm or larger	0.006 km 0.3 km	0.5% 27%

Note: 'AC' is Asbestos-Concrete, 'PVC' is poly-vinylchloride (plastic)

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 Free chlorine residual, Salinity, TDS Monthly- Total Iron and Manganese
Monthly (or as required)	BC Centre for Disease Control	Total coliforms, E.Coli
Monthly/Quarterly (well water only)	North Island Labs	Monthly- Chloride Quarterly- Chloride, Sodium, Conductivity, TDS
Annual Source Water Testing (every Fall)	North Island Labs	Complete potability testing of raw well water, including T-Ammonia
Annual System Water Testing (every Spring)	North Island Labs	Complete potability testing of distribution system , including T-Ammonia

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 Environmental/Water section, under “Water Service Areas” then “WaterSmart 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

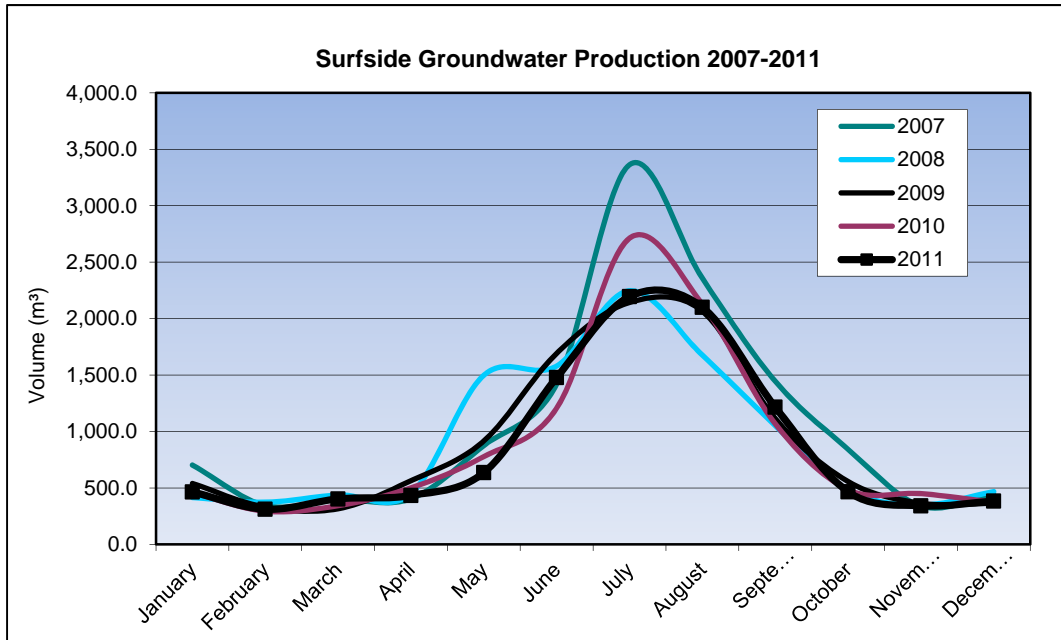
Very few complaints and inquiries were received from the Surfside water service area, and were typically related to watering restriction times.



Surfside Pump house

6. Groundwater Production and Consumption

The monthly groundwater production in the Surfside Water Service Area for the past 5 years is shown in the chart below. Groundwater production in 2011 was lower than in previous years.



Consumption

In the Fall/Winter of 2011, the average usage per home in Surfside was 0.36 cubic metres per day (79 imperial gallons). In the summer, the average water usage was 1.4 cubic metres per day (308 imperial gallons). Based on these figures, the annual consumption per capita is estimated to be 295 L/day (based on 2.4 people/household). This consumption is 10% more than the RDN system average of 269 L/day/capita in 2011.

7. Maintenance Program

A weekly pump station inspection is carried out 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 service area due to insufficient supply and capacity for fire flows. Twenty-four hour on-call coverage is in place to respond to water system emergencies and alarms.

8. Water Service Area Projects

8.1 2011 Completed Studies & Projects

- Amalgamated RDN water systems' rates & regulations into one bylaw;
- Enforced the outdoor sprinkling regulations;
- Prepared a Draft Cross-Connection Control Bylaw;
- Carried out a comprehensive water conservation campaign (Team WaterSmart);
- Updated and improved the RDN website at www.rdn.bc.ca;
- Updated the Emergency Response Plan;

- Utilized the Auto E-message service to notify member residents of water service disruptions and upcoming maintenance activities;
- Applied a low-flush toilet incentive;
- Maintained excellent customer complaint and service request response times;
- Continued quality control through regular testing and monitoring of our water systems; and
- Completed additional educational programs.

8.2 2012 Proposed Projects & Upgrades

- Complete the Cross-Connection Control bylaws, and establish a procedure for reviewing commercial and industrial properties for water service area risks;
- Update the Standard Operating Procedures; and
- Apply a rainwater harvesting (rain barrel) incentive.

9. **Emergency Response Plan**

The Regional District Emergency Response Plan (ERP) contains procedures and contact information to efficiently respond to water system emergencies such as contamination of water supply, loss of supply, and pump failure. The ERP was reviewed and updated in 2011, and copies are available on our website, at each RDN office, in each pumphouse, and in each Water Services vehicle. A copy of the ERP is also attached to this report 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 2010, a Draft Cross-Connection Control Bylaw was prepared, and is anticipated to be finalized in 2012. Additionally, the program in 2012 will include:

- A formal survey of existing and potential cross-connections, and
- An audit of RDN-owned facilities in each water service area.

11. **Closing**

An annual report for the year 2012 will be prepared and submitted to the Vancouver Island Health Authority in the Spring of 2013. Annual reports are also available on our website at www.rdn.bc.ca in the SERVICES section, under “Water & Utility Services” then “WaterSmart Communities”.

APPENDIX A

**MAP OF SURFSIDE
WATER SERVICE AREA**

APPENDIX B

WATER QUALITY TESTING RESULTS