

Regional District of Nanaimo

SURFSIDE

**Water Local Service Area
Annual Report**

2007



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Appendix A - Map of Surfside Water Local Service Area

Appendix B - Water Quality Testing Results

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1. Introduction

The following annual report describes the Surfside Water Local Service Area and summarizes the water quality and production data from 2007. 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 2008.

2. Surfside Water System

The Surfside Water Service Area was established in 1986 and comprises an area north 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 2 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

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

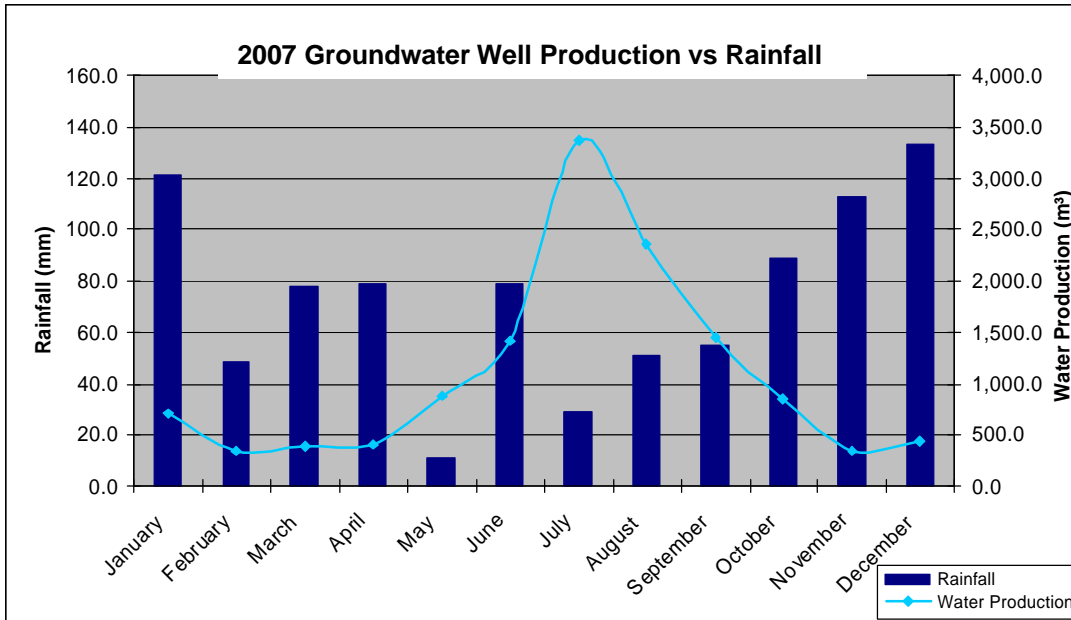
Up-to-date water quality reports and lab data are posted monthly on the RDN website at www.rdn.bc.ca in the WaterSmart section, under “Communities”. Tables of water quality testing results for both the source water and distribution system are provided at the end of this report under Appendix B.

5. Water Quality Inquiries and Complaints

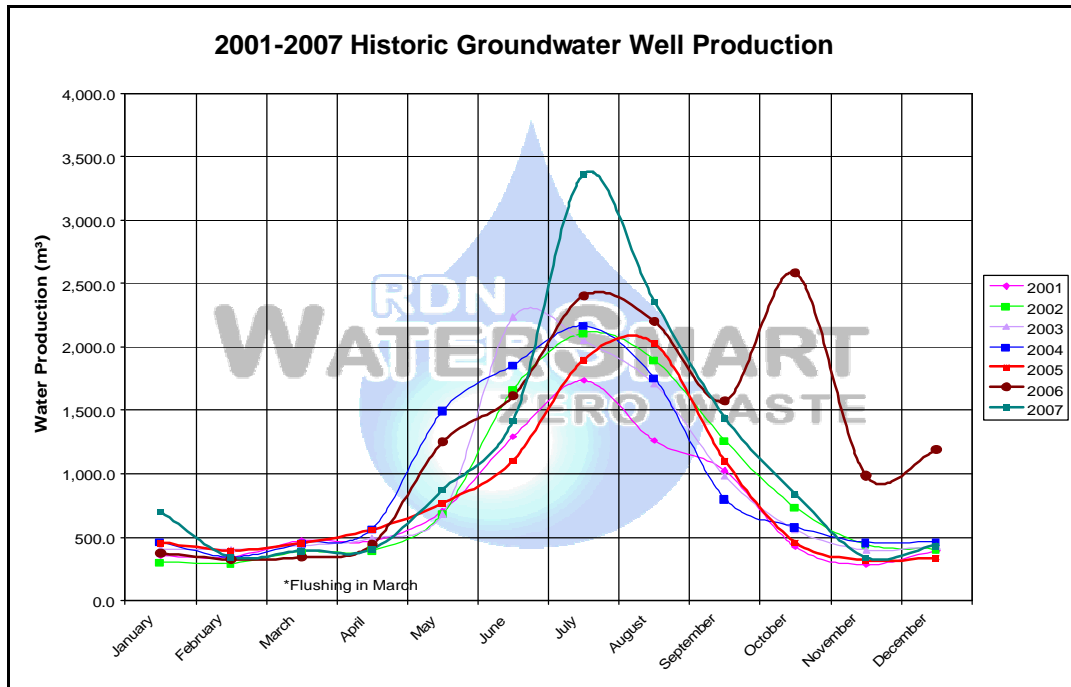
Very few complaints and inquiries were received from the Surfside water service area, and were typically related to low pressure and interruption of supply (power outages).

6. Groundwater Production and Consumption

The 2007 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 how rainfall affects the amount of groundwater pumped.



The monthly groundwater production for Surfside for the past 7 years is shown in the chart below. Groundwater production in 2007 was typically higher than previous years.



Consumption

In the Fall/Winter of 2007, the average usage per home in Surfside was 0.41 cubic metres per day (90 imperial gallons). In the summer, the average water usage was 1.4 cubic metres per day (308 imperial gallons).

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.

8. Water System Projects

8.1 2007 Completed Studies Projects

- Improved the pressure system in Surfside.
- A Drinking Water - Watershed Protection Action Plan was completed.
- An Innovative Water Use and Re-Use Study was completed.
- A Water Use Bylaw - Best Practices Review was completed.
- A formalized Cross Connection Control Program was initiated.
- A comprehensive water conservation program ([WaterSmart](#)) was carried out from May to October.
- The RDN [WaterSmart](#) website was updated and improved.
- The Emergency Response Plan was reviewed and updated.
- A SCADA (Supervisory Control and Data Acquisition) Study was initiated.
- The annual watermain flushing was completed.

8.2 2008 Proposed Projects & Upgrades

- Radio Meter Pilot Study (for water meters)
- Upgrades to flush-outs
- New signage for all Utilities facilities
- Re-keying all locked facilities
- Implement innovative use and re-use technology
- Stand-alone water testing stations to be installed
- Promote Cross Connection Control awareness and facility audits

8.3 2008 Proposed Studies

- Complete SCADA study and integrate into 2009 budget
- Rainwater management strategy
- Sodium hypochlorite vs. on-site chlorine generation
- Comprehensive capital plan development

9. Emergency Response Plan

The Emergency Response Plan (ERP) was reviewed and updated in 2007. 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.

A consultant who specializes in municipal Cross Connection Control was hired to enhance the RDN Cross Connection Control Program in 2007/2008. The program in 2008 will include:

- A review and comparison of successful cross-connection control programs implemented by other small water systems nearby,
- A survey of existing or potential cross-connection risks for each category of RDN customer (i.e., residential, commercial, industrial, institutional, etc.),
- 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,
- The set up of a customer database with a maintenance history of testable backflow prevention assemblies at each facility, and
- Staff training and certification in Backflow Assembly Testing (BCWWA certified).

11. Closing

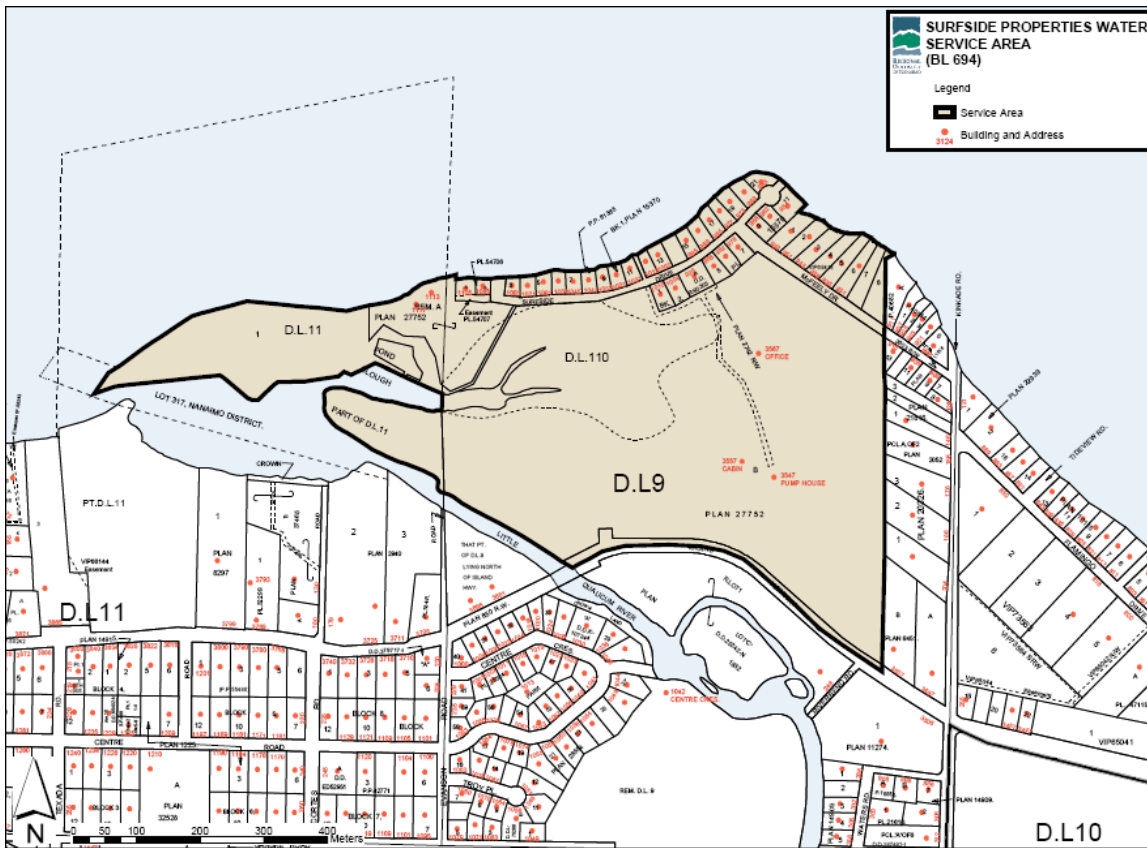
An annual report for the year 2008 will be prepared and submitted to the Vancouver Island Health Authority in the Spring of 2009. Annual reports are also available on our website at www.rdn.bc.ca in the WaterSmart section, under “Communities”.

APPENIDX A

**MAP OF SURFSIDE
WATER LOCAL SERVICE AREA**

SURFSIDE

WATER LOCAL SERVICE AREA



APPENDIX B

WATER QUALITY TESTING RESULTS

APPENDIX C

EMERGENCY RESPONSE PLAN