

Regional District of Nanaimo

SURFSIDE

**Water Local Service Area
Annual Report**

2006

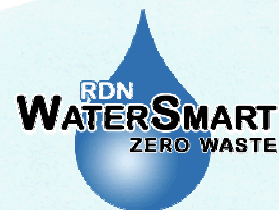


Table of Contents

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 Average Consumption.....	3
7.	Maintenance Program.....	3
8.	Water System Projects.....	4
8.1	2006 Completed Projects	4
8.2	2007 Proposed Projects & Upgrades	4
8.3	2007 Proposed Studies.....	4
9.	Emergency Response Plan.....	4
10.	Cross Connection Control.....	4
11.	Closing.....	4

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 2006. 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 2007.

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 a pressure tank. 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 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, Fecal coliforms 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 (www.rdn.bc.ca/WaterSmart). 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.

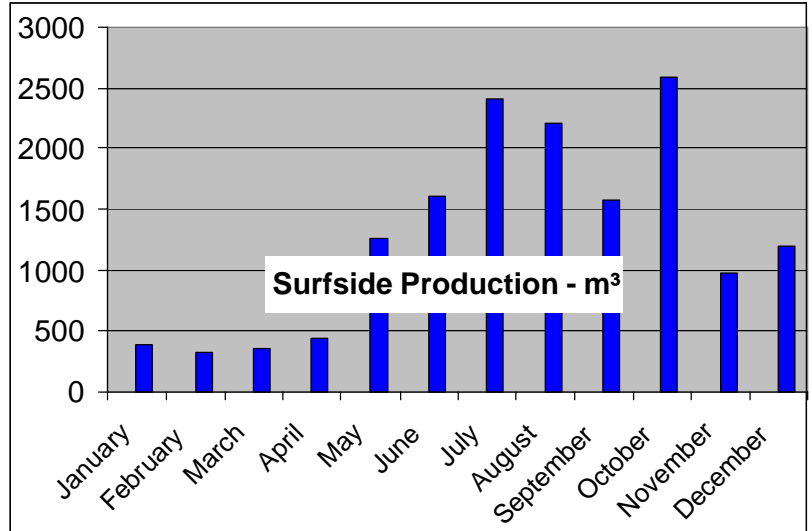
6. Groundwater Production and Average Consumption

Average monthly groundwater production (total from all wells) is shown in the table and chart below.

Monthly Production

January	376	m³
February	326	m³
March	345	m³
*April	443	m³
May	1254	m³
June	1614	m³
July	2403	m³
August	2204	m³
September	1574	m³
October	2583	m³
November	985	m³
December	1191	m³

* indicates watermain flushing in April

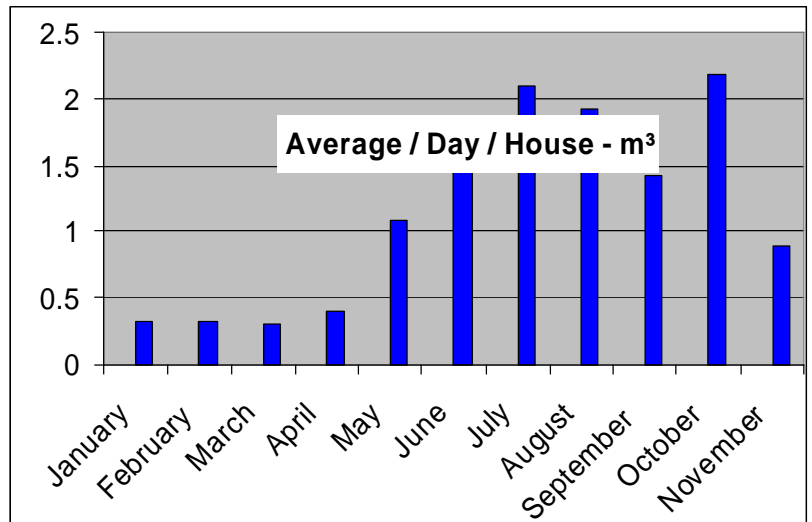


The average household water consumption per month is shown in the table and chart below.

Average / Day / House

January	0.328	m³
February	0.315	m³
March	0.301	m³
*April	0.399	m³
May	1.093	m³
June	1.454	m³
July	2.095	m³
August	1.922	m³
September	1.418	m³
October	2.182	m³
November	0.887	m³
December	1.038	m³

* indicates watermain flushing in April



Groundwater production and household water consumption both increased dramatically from May to August despite the implementation of outdoor watering restrictions.

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 2006 Completed Projects

- A comprehensive water conservation program was carried out from May to October.
- A Standard Operating Procedures Manual was created for all routine Utilities duties.
- The Emergency Response Plan was reviewed and updated.
- A security review was completed by an independent agency and a report with recommendations was provided.
- A web-based Capital Asset Management Program was completed to inventory all water system pipes, valves, wells, reservoirs, hydrants, and manholes, etc. to assist with infrastructure replacement priorities.

8.2 2007 Proposed Projects & Upgrades

- Re-keying all locked facilities.
- Other security improvements.
- Addressing the design of a SCADA system.

8.3 2007 Proposed Studies

- Innovative water supply and reuse.
- Well redevelopment planning.
- Water Use Bylaw/Best Practices Review.

9. Emergency Response Plan

The Emergency Response Plan (ERP) was reviewed and updated in 2006. A copy of the ERP is attached in Appendix C.

10. Cross Connection Control

A formalized Cross Connection Control Program will be initiated in 2007. Cross connection controls already in-place include check valves at each residential and commercial water meter, and well piping disconnected from a house where the owner has a municipal water connection.

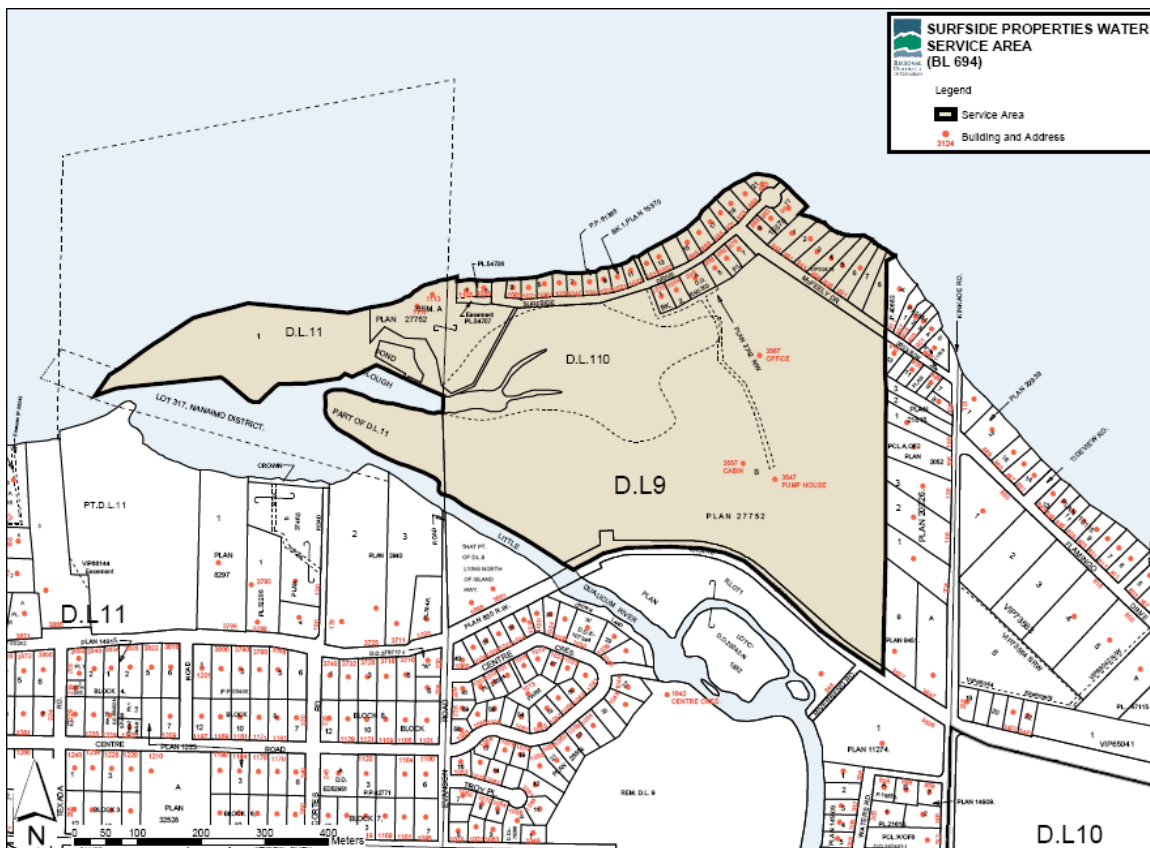
11. Closing

An annual report for the year 2007 will be prepared and submitted to the Vancouver Island Health Authority in the Spring of 2008. Annual reports are also available on our website at www.rdn.bc.ca/WaterSmart.

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