

REGIONAL DISTRICT OF NANAIMO

Water Service Area Annual Report 2015



Surfside Water System

June 2016

REGIONAL DISTRICT OF NANAIMO

Water & Utility Services Department

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Appendix A - Map of Surfside Water Service Area

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1. Introduction

The following annual report describes the Surfside Water Service Area and summarizes the water quality and production data from 2015. 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 Island Health by the Spring of 2016.

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 2012) 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
Weekly (or as required)	BC Centre for Disease Control	Total coliforms, E.Coli
Monthly/Quarterly (well water only)	Maxxam Labs	Monthly- Chloride Quarterly- Chloride, Sodium, Conductivity, TDS
Annual Source Water Testing (every Fall)	Maxxam Labs	Complete potability testing of raw well water, including T-Ammonia
Annual System Water Testing (every Spring)	Maxxam 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

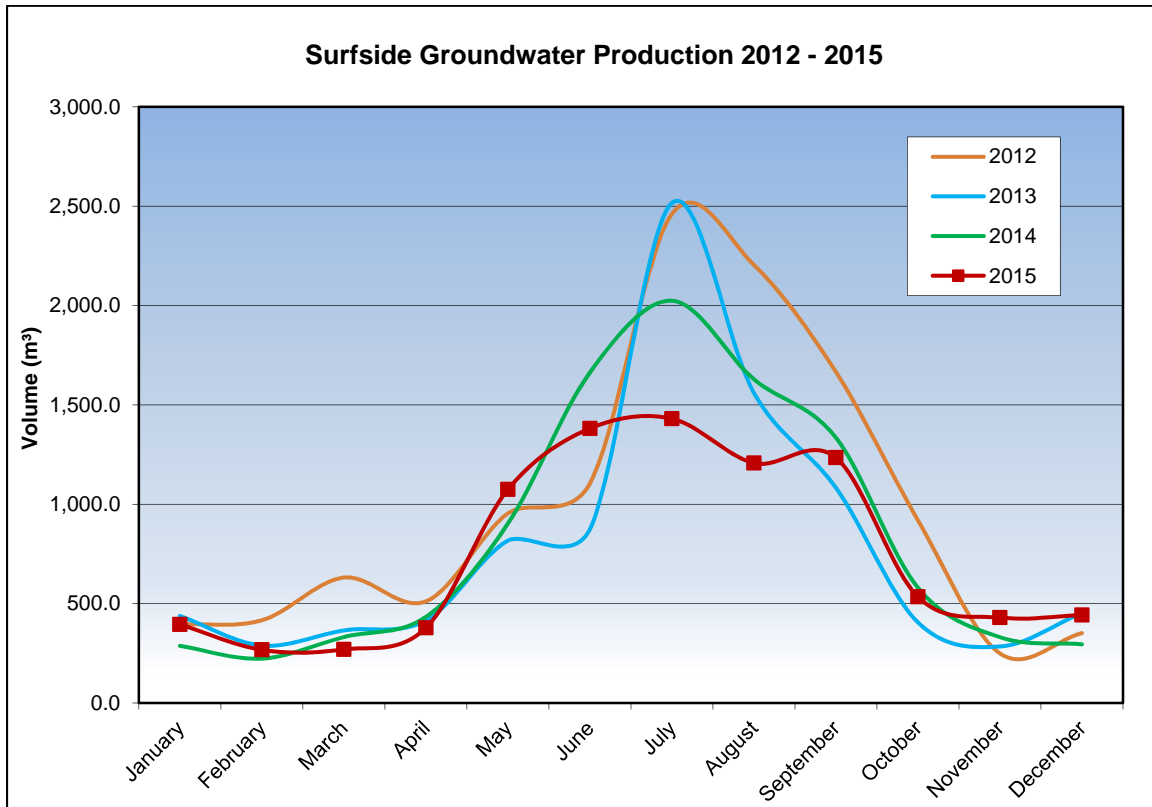
Very few complaints and inquiries were received from the Surfside water service area, and were typically related to watering restriction times, and low water pressure on sprinkling days.

Surfside Pumphouse



6. Groundwater Production and Consumption

The monthly groundwater production in the Surfside Water Service Area for the past 4 years is shown in the chart below. Groundwater production in 2015 was typically lower than previous years. This is likely due to Stage 4 watering restrictions put in place in early July.



Consumption

In the Fall/Winter of 2015, the average usage per home in Surfside was 0.34 cubic metres per day (75 imperial gallons). In the summer, the average water usage was 1.3 cubic metres per day (286 imperial gallons). Based on these figures, the annual consumption per capita is estimated to be 277 L/day (based on 2.4 people/household). This consumption is 3% more than the RDN system average of 276 L/day/capita in 2015.

7. Maintenance Program

A weekly pump station inspection is carried out to reduce or eliminate the risk of contamination and system failure, and to ensure the consistent application of chlorine for treatment purposes. 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 2015 Completed Studies & Projects

- Completed a draft wellhead protection plan;
- Installed a flow meter in the pumphouse;
- Contacted Environment Canada to gain permission to dig in the watermain right-of-way;
- Achieved two Operators' Backflow Assembly Tester certification;
- Offered irrigation audits to high water users;
- Authorized several water bill rebates under the RDN's Leak Policy;
- Updated the Emergency Response Plan;
- Updated the Standard Operating Procedures;
- Enforced the outdoor sprinkling regulations;
- Updated the Water Services asset database;
- Carried out a comprehensive water conservation campaign (Team WaterSmart);
- Updated and improved the RDN website at www.rdn.bc.ca;
- Utilized the Auto E-message service to notify member residents of water service disruptions and upcoming maintenance activities;
- Applied a rainwater harvesting (rain barrel) incentive;
- Maintained a high level of water quality;
- Maintained excellent customer complaint and service request response times;
- Continued quality control through regular testing and monitoring of water system; and
- Completed additional educational programs.

8.2 2016 Proposed Projects & Upgrades

- Re-align water supply main within the right-of-way on the federal nature reserve;
- Offer irrigation audits to high water users;
- Enforce the outdoor sprinkling regulations;
- Update the Emergency Response Plan;
- Carry out a comprehensive water conservation campaign (Team WaterSmart);
- Update and improved the RDN website at www.rdn.bc.ca;
- Utilize the Auto E-message service to notify member residents of water service disruptions and upcoming maintenance activities;
- Continue to offer a rainwater harvesting (rain barrel) and other water-saving incentives;
- Maintain a high level of water quality;
- Maintain excellent customer complaint and service request response times;
- Continue quality control through regular testing and monitoring of water system;
- Meet the new Water Sustainability Act with regards to well licensing; and
- Complete additional educational programs.

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 2015, and copies are available on our website, at each RDN office, in each pump house, and in each Water Services vehicle. A copy of the ERP is also attached to this report in Appendix C.

10. Cross Connection Control

In 2012, *Regional District of Nanaimo Water Use Regulation Bylaw No. 1654* was adopted which includes enhanced cross connection control and backflow protection wording. A separate Cross Connection Control bylaw was deemed not to be required.

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. Two RDN Operators achieved their Backflow Prevention Tester re-certification in 2015.

11. Closing

An annual report for the year 2016 will be prepared and submitted to Island Health in the Spring of 2017. Annual reports are also available on our website at www.rdn.bc.ca in the SERVICES section, under “Water & Utility Services” then “WaterSmart Communities”.

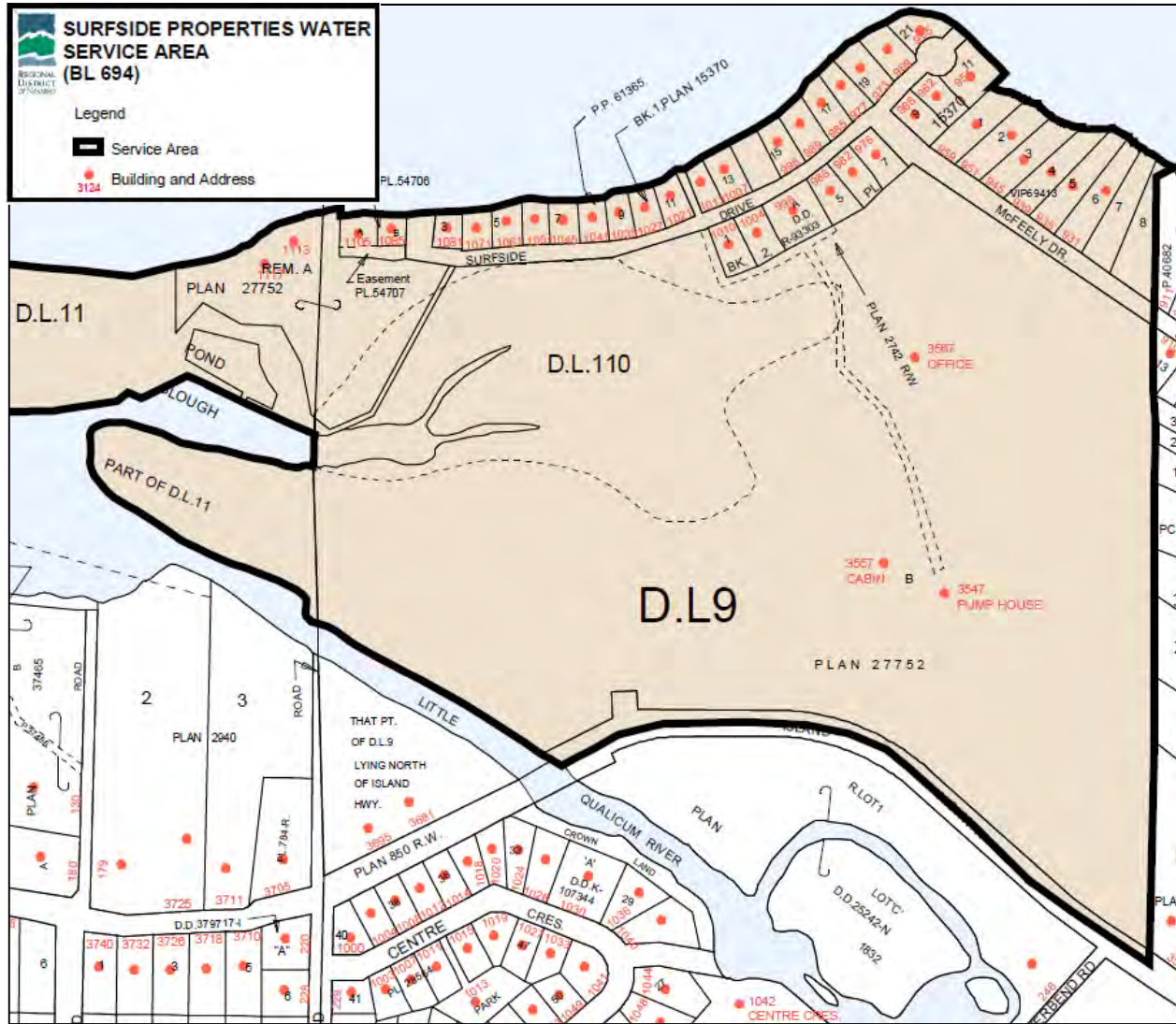


Waterfront access from
Surfside Drive

APPENDIX A

**MAP OF SURFSIDE
WATER SERVICE AREA**

SURFSIDE WATER SERVICE AREA



APPENDIX B

WATER QUALITY TESTING RESULTS