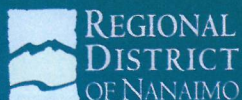




ENGLISHMAN RIVER

Water Service Area Annual Report 2011

Prepared by:



REGIONAL
DISTRICT
OF NANAIMO

REGIONAL DISTRICT OF NANAIMO

*Water Services Department
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Appendix A - Map of Englishman River Water Service Area

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1. Introduction

The following annual report describes the Englishman River Community Water Supply 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. Englishman River Water Service Area

The Englishman River Water Service Area was established in 2003 and comprises an area near the southern boundary of the City of Parksville between the Island Highway and the Englishman River. There are 135 water service connections in the Englishman River Water Service Area. The water source comes from a series of groundwater wells located nearby. The water is chlorinated and stored in one reservoir. A portable generator is available for emergency power outages. A map of the Englishman River Water Service Area is provided in Appendix A for reference.

2.1 Groundwater Wells

Groundwater production wells PW #2 and PW #3 are located in the well field at 2231 Rascal Lane, Parksville, B.C. Test well PW #1 is located on Peterson Road, and Test Well PW #4 is located on Rivers Edge Drive.

Well / Name	Well Depth	In Use	Wellhead Protection	Treated/Untreated with Chlorine
PW #1	52.4 m	No	Yes	n/a
PW #2	29.3 m	Yes	Yes	Treated
PW #3	32.6 m	Yes	Yes	Treated
PW #4	29.6 m	No	Yes	n/a

2.2 Reservoirs

One dual-chambered concrete service reservoir is present at 890 Stonefly Close, and has a capacity of 795 m³ (175,000 imperial gallons).

2.3 Distribution System

The water distribution system is summarized in the table below. Fire hydrants (24) are located throughout the system.

Watermain Material	Length of mains in service area	Prevalence in Water Service Area
Asbestos-concrete	none	n/a
<u>PVC</u> : 150mm or smaller	3.6 km	28.8%
200mm or larger	8.9 km	71.2%

Note: '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, Chlorine residual, Salinity, TDS, Monthly- Iron and Manganese
Monthly	BC Centre for Disease Control	Total coliforms, E.Coli
Annual Source Water Testing (every Fall)	North Island Labs	Complete potability testing of raw well water (including T-Ammonia in 2012)
Annual Water System Testing (every Spring)	North Island Labs	Complete potability testing of distribution system (including T-Ammonia in 2012)

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 Services section, under “Water & Utility Services” 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

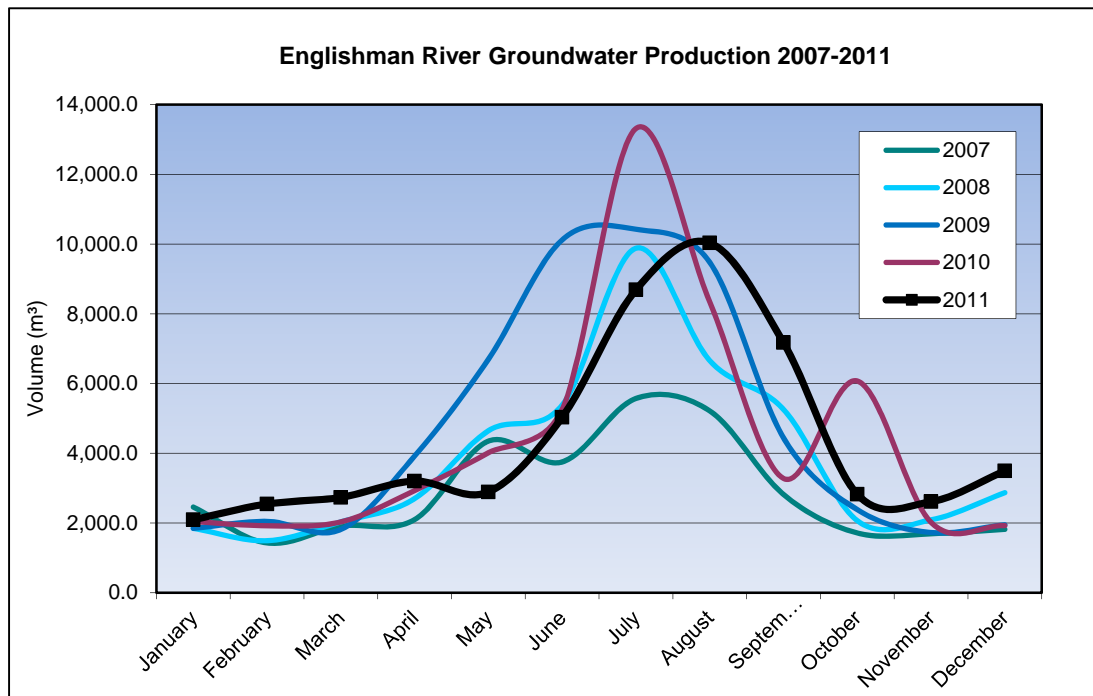
A few complaints and inquiries were received from the Englishman River Water Service Area in 2011, and were typically related to irrigation leaks and high water bills.



Watering Sampling Station on Rascal Lane

6. Groundwater Production and Consumption

The monthly groundwater production in the Englishman River Water Service Area for the past 5 years is shown in the chart below. Groundwater production in 2011 was average in comparison to previous years, despite the new homes and landscaping being installed in this subdivision.



Consumption

In the Fall/Winter of 2011, the average usage per home in the Englishman River Water Service Area was 0.51 cubic metres per day (112 imperial gallons). In the summer, the average water usage was 1.7 cubic metres per day (370 imperial gallons). Based on these figures, the annual consumption per capita is estimated to be 375 L/day (based on 2.4 people per household). This consumption is 40% more than the RDN system average of 269 L/day/capita for 2011.

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. Fire hydrants are serviced once per year (either 'A-level' or 'B-level' maintenance). The water storage reservoir is drained and cleaned once every two years.

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

- Cleaned the water storage reservoir (both halves);
- Enforced the outdoor sprinkling regulations;
- Completed annual B-service fire hydrant maintenance;
- Amalgamated RDN water systems' rates & regulations into one bylaw;
- 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 the low-flush toilet 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 our water systems; and,
- Completed additional educational programs.

8.2 2012 Proposed Projects & Upgrades

- Complete the Cross-Connection Control Bylaw, and establish a procedure for reviewing commercial and industrial properties for water system risks;
- Update 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 2008, a review and comparison of successful cross-connection control programs in other small Water Service Areas 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.

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

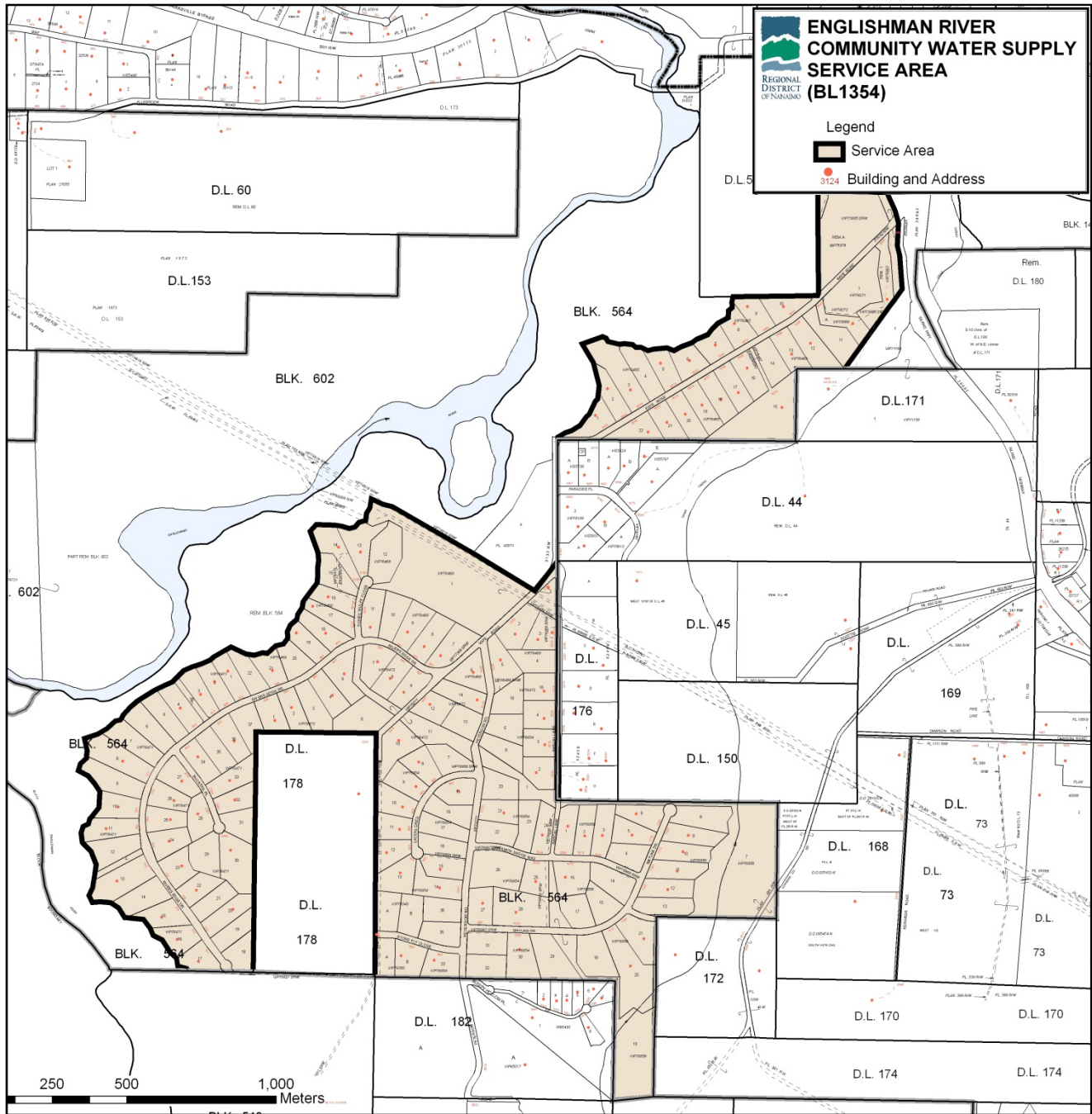
An annual report for the year 2012 will be prepared and submitted to the Vancouver Island Health Authority in the Spring of 2013. Annual reports are also available on our website at www.rdn.bc.ca in the SERVICES section, under "Water & Utility Services" then "WaterSmart Communities".

APPENDIX A

MAP OF ENGLISHMAN RIVER

WATER SERVICE AREA

ENGLISHMAN RIVER WATER SERVICE AREA



APPENDIX B

WATER QUALITY TESTING RESULTS