Regional District of Nanaimo

ENGLISHMAN RIVER

Water Local Service Area Annual Report

2007

REGIONAL DISTRICT OF NANAIMO

RDN WATERSMART ZERO WASTE

Table of Contents

1. Introduction

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

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. The water source for the RDN Englishman River Water Service Area comes from a series of groundwater wells located nearby. The water is chlorinated and stored in one reservoir. 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 m^3 (175,000 imperial gallons).

2.3 Distribution System

The water distribution system in Englishman River is largely comprised of 100mm, 150mm and 200mm PVC watermains. Fire hydrants are located throughout 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
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

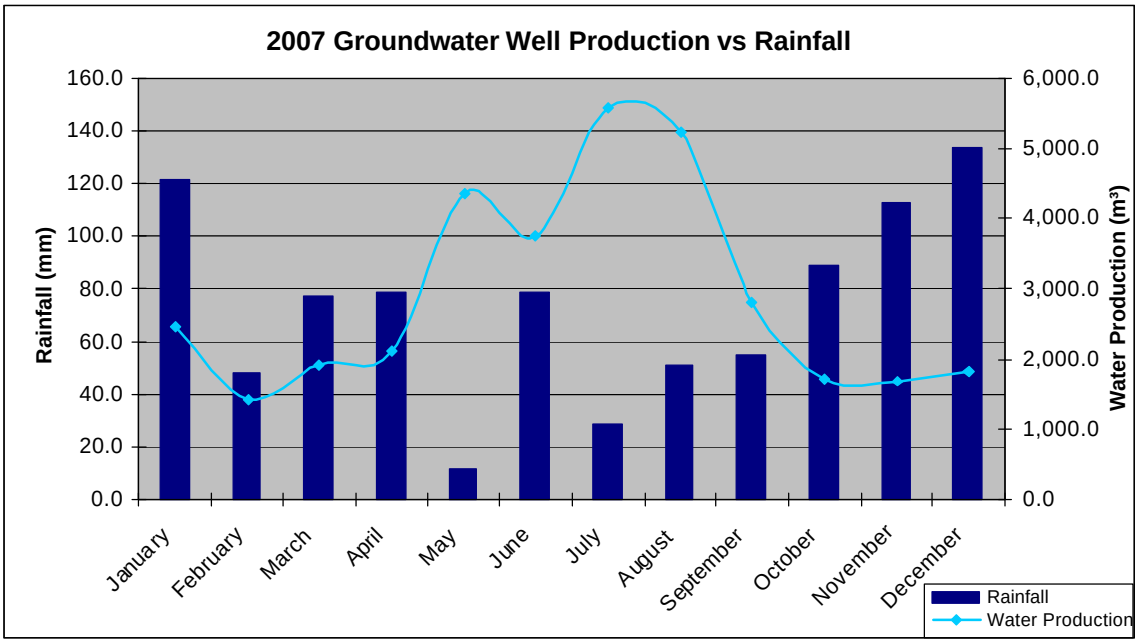
Up-to-date water quality reports and lab data are posted monthly on the RDN website at www.rdn.bc.ca in the WaterSmart section, under "Communities". Tables of water quality testing results for both the source water and distribution system are provided at the end of this report under Appendix B.

5. Water Quality Inquiries and Complaints

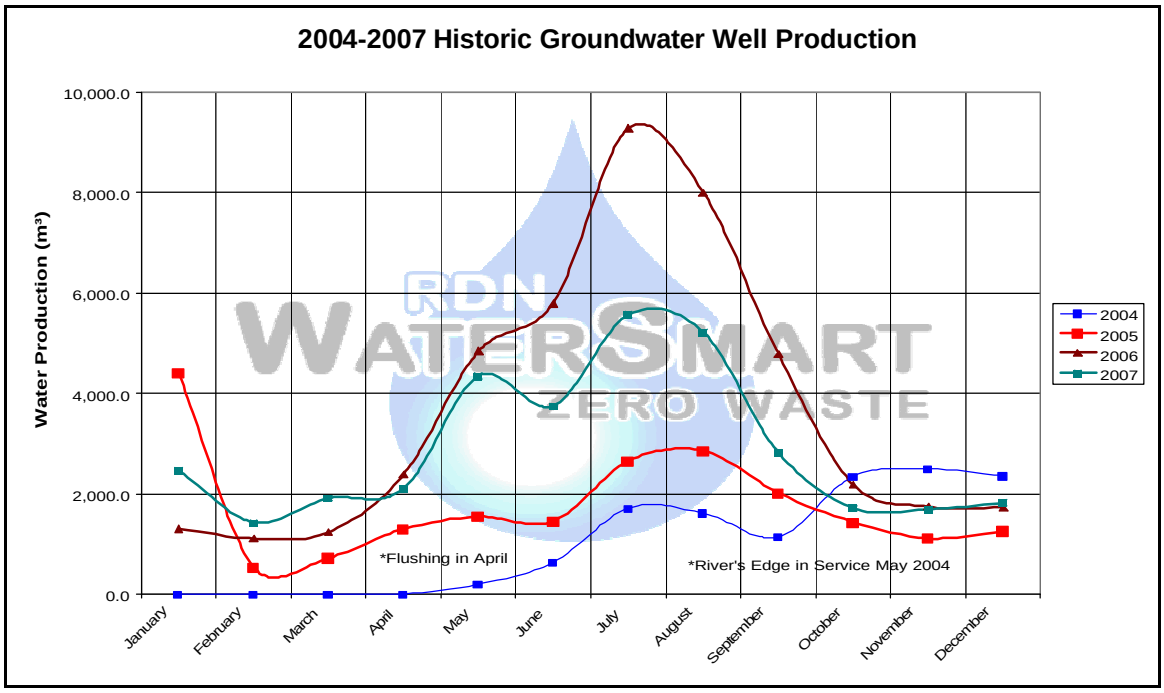
No complaints or inquiries were received from the Englishman River water system in 2007.

6. Groundwater Production and Consumption

The 2007 monthly groundwater production for the Englishman River water system is shown in the chart below. The Englishman River water system is comprised of 101 residential connections. 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 in the Englishman River water system for the past 7 years is shown in the chart below. Groundwater production in 2007 was much lower than previous years.



Consumption
In the Fall/Winter of 2007, the average usage per home in the Englishman River water system was 0.58 cubic metres per day (127 imperial gallons). In the summer, the average water usage was 1.35 cubic metres per day (297 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. Annual fire hydrant maintenance is completed in the Fall.

8. Water System Projects

8.1 2007 Completed Studies & Projects

- A Drinking Water - Watershed Protection Action Plan was completed.
- An Innovative Water Use and Re-Use Study was initiated.
- A Water Use Bylaw - Best Practices Review was initiated.
- 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.
- Annual watermain flushing was completed.

8.2 2008 Proposed Projects & Upgrades

- Upgrade wellhead covers
- 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).
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11. Closing

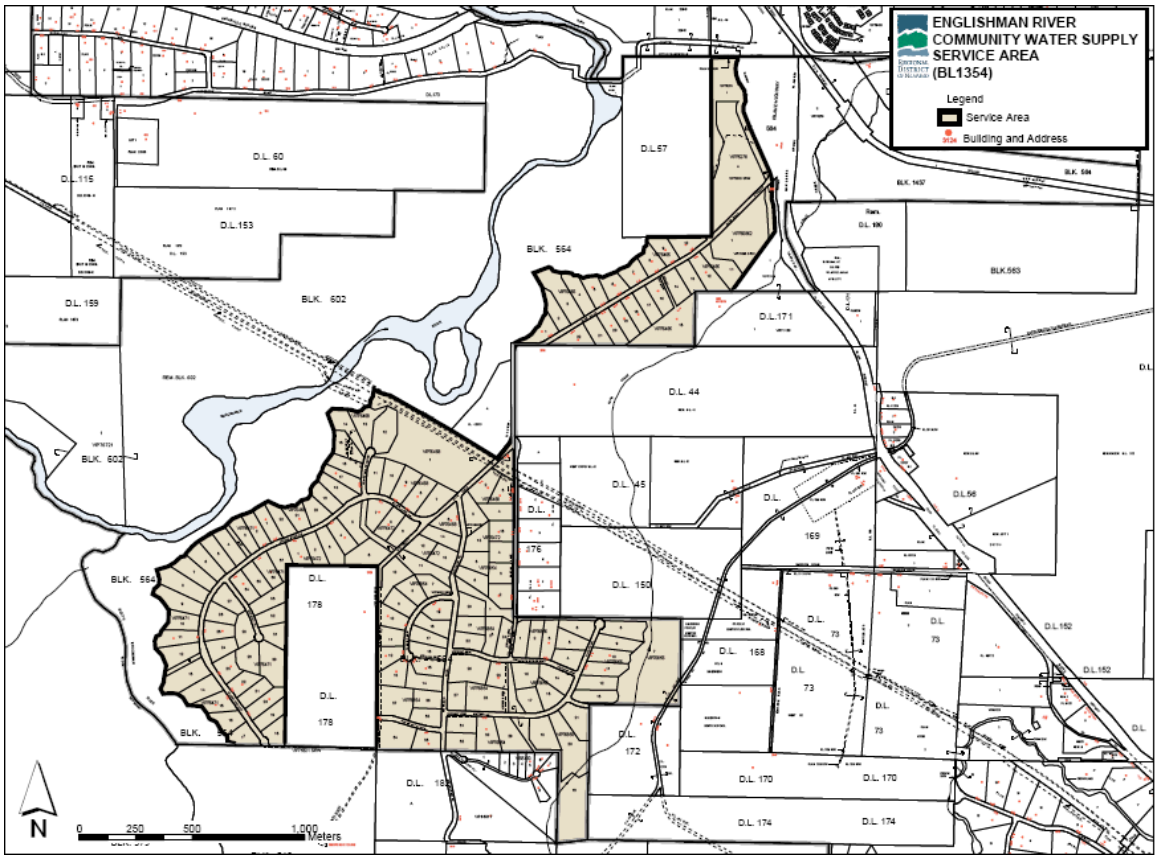
An annual report for the year 2008 will be prepared and submitted to the Vancouver Island Health Authority in the Spring of 2009. Annual reports are also available on our website at www.rdn.bc.ca in the WaterSmart section, under “Communities”.

APPENIDX A

MAP OF ENGLISHMAN RIVER WATER SYSTEM

ENGLISHMAN RIVER

WATER SYSTEM



APPENDIX B

WATER QUALITY TESTING RESULTS

APPENDIX C

EMERGENCY RESPONSE PLAN