

A large, stylized graphic of a water swirl in light blue and yellow-green, positioned behind the title text.

ENGLISHMAN RIVER Water Service Area Annual Report 2009



Prepared by:

REGIONAL DISTRICT OF NANAIMO
Water Services Department

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Table of Contents

| | |
|---|---|
| 1. Introduction | 1 |
| 2. Englishman River Water Service Area..... | 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 Consumption | 3 |
| 7. Maintenance Program..... | 3 |
| 8. Water Service Area Projects..... | 4 |
| 8.1 2009 Completed Studies & Projects..... | 4 |
| 8.2 2010 Proposed Projects & Upgrades..... | 4 |
| 9. Emergency Response Plan | 4 |
| 10. Cross Connection Control | 4 |
| 11. Closing..... | 5 |

Appendix A - Map of Englishman River Water Service Area

Appendix B - Water Quality Testing Results

Appendix C - Emergency Response Plan

1. Introduction

The following annual report describes the Englishman River Community Water Supply Service Area and summarizes the water quality and production data from 2009. 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 2010.

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. 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 In Place | 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 in Nanoose Bay is summarized in the table below. Fire hydrants (24) are located throughout the water service area.

| Watermain Material | Length of mains in NBP Water Service Area | Prevalence in Water Service Area |
|--|---|----------------------------------|
| Asbestos-concrete | none | n/a |
| <u>PVC:</u> 150mm or smaller 200mm or larger | 3.6 km 8.9 km | 28.8% 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 Total Dissolved Solids |
| Weekly (Health Dept. Requirement) | BC Centre for Disease Control | Total, Fecal coliforms, E.Coli |
| Monthly | RDN (in-house) Laboratory | Iron, Manganese |
| 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

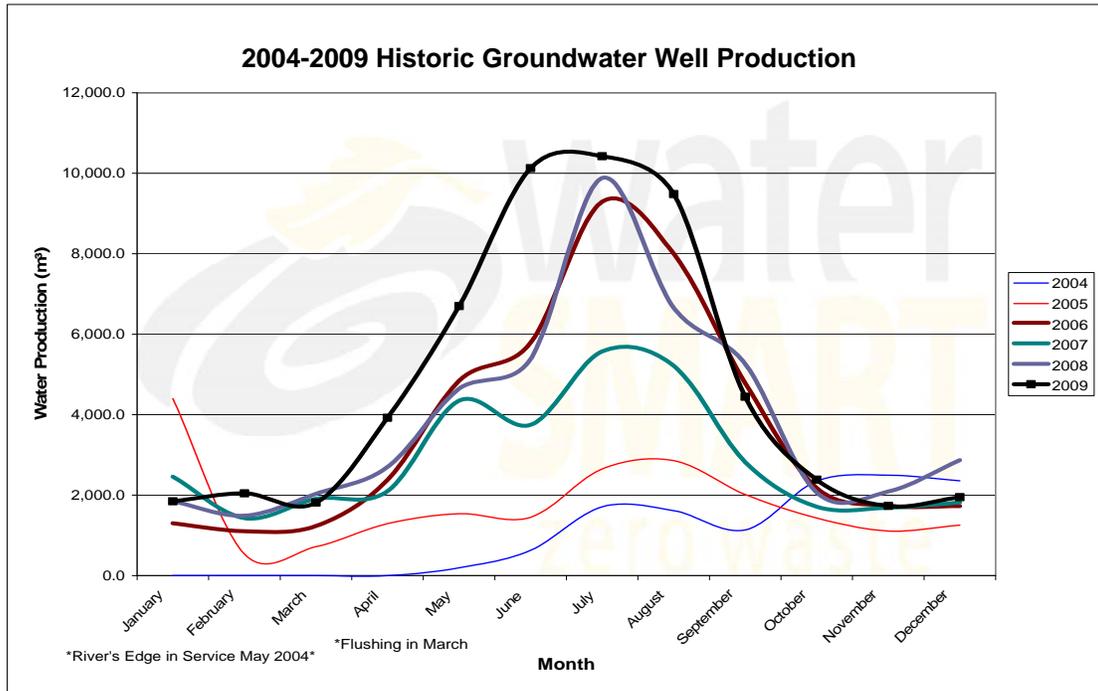
Up-to-date water quality reports and lab data are posted monthly on the RDN website at www.rdn.bc.ca in the WaterSmart section, under “Communities”. Tables of water quality testing results for both the source water and distribution system are provided at the end of this report under Appendix B.

5. Water Quality Inquiries and Complaints

A few complaints and inquiries were received from the Englishman River Water Service Area in 2009, and were typically related to irrigation leaks and high water bills.

6. Groundwater Production and Consumption

The monthly groundwater production in the Englishman River Water Service Area for the past 6 years is shown in the chart below. The Englishman River Water Service Area is comprised of 118 residential connections. Groundwater production in 2009 was higher than in previous years, likely due to the new homes and landscaping being installed in this subdivision.



Consumption

In the Fall/Winter of 2009, the average usage per home in the Englishman River Water Service Area was 0.76 cubic metres per day (167 imperial gallons). In the summer, the average water usage was 2.3 cubic metres per day (493 imperial gallons). Based on these figures, the annual consumption per capita is estimated to be 548 L/day (based on 2.4 people per household). This consumption is 59% more than the RDN system average of 345 L/day/capita for 2009.

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 2009 Completed Studies & Projects

- Completed keyless door entry installations at the Field Office and pumphouses;
- Completed annual B-service fire hydrant maintenance;
- 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;
- Considered Scada options for implementation;
- Utilized the Auto E-message service to notify member residents of water service disruptions and upcoming maintenance activities;
- Developed a 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 Service Areas; and
- Completed additional educational programs.

8.2 2010 Proposed Projects & Upgrades

- Complete the Cross-Connection Control bylaws, and establish a procedure for reviewing commercial and industrial properties for Water Service Area risks.

9. Emergency Response Plan

The Emergency Response Plan (ERP) was reviewed and updated in 2009. 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.

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.

The program in 2010 will include:

- A survey of existing and potential cross-connections,
- 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.

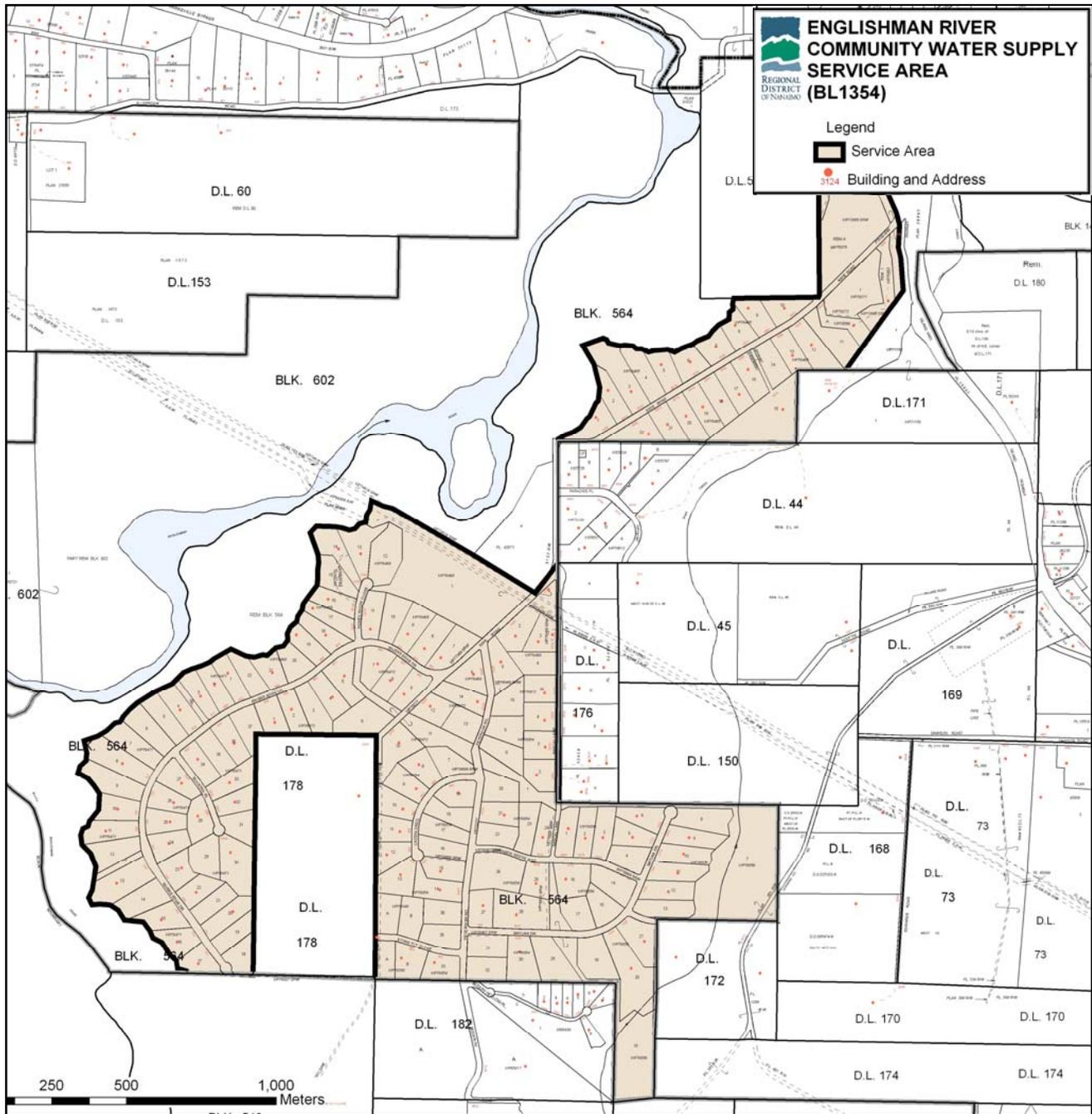
11. Closing

An annual report for the year 2010 will be prepared and submitted to the Vancouver Island Health Authority in the Spring of 2011. 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 SERVICE AREA**

ENGLISHMAN RIVER WATER SERVICE AREA



APPENDIX B

WATER QUALITY TESTING RESULTS



Regional District of Nanaimo - Utilities Department

Englishman River Estates Water Analysis - Monthly Report



| Date | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 06-Jan | 1969 Kaye Rd | 0 | 0 | 0 | 0 | 6 | 7.5 | 0.65 | 149 | 0.1 | 317 | 0.01 | 0.029 |
| 13-Jan | Lot 34 Stonefly | | | 0 | 0 | 6 | 7.2 | 0.65 | 152 | 0.2 | 323 | | |
| 20-Jan | 1969 Kaye Rd | | | 0 | 0 | 5 | 7.1 | 0.6 | 142 | 0.1 | 306 | | |
| 27-Jan | 1969 Kaye Rd | | | 0 | 0 | 4 | 7.3 | 0.52 | 143 | 0.1 | 306 | | |
| | Average | 0 | 0 | 0 | 0 | 5.3 | 7.3 | 0.61 | 146.5 | 0.1 | 313.0 | 0.01 | 0.029 |
| | Maximum | 0 | 0 | 0 | 0 | 6 | 7.5 | 0.65 | 152 | 0.2 | 323 | 0.01 | 0.029 |
| | Minimum | 0 | 0 | 0 | 0 | 4 | 7.1 | 0.52 | 142 | 0.1 | 306 | 0.01 | 0.029 |

Red font indicates non-compliance with Canadian Drinking Water Guidelines / BC Approved Water Quality Guidelines

Coliforms are measured in colony forming units (CFU) per 100 millilitres of water

* Yellow Column Coliform tests are done by Health Department

Green tests are completed by RDN

Comments:

Iron and manganese are found naturally in drinking water. Levels found in these samples are not a health concern.



Regional District of Nanaimo - Utilities Department

Englishman River Estates Water Analysis - Monthly Report



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|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 03-Feb | 1969 Kaye Rd | 0 | 0 | 0 | 0 | 4 | 7.2 | 0.53 | 140 | 0.1 | 304 | 0 | 0.022 |
| 10-Feb | Lot 34 Stonefly | | | 0 | 0 | 5 | 7.3 | 0.49 | 141 | 0.1 | 305 | | |
| 17-Feb | 1969 Kaye Rd | | | 0 | 0 | 4 | 7.1 | 0.45 | 142 | 0.1 | 302 | | |
| 24-Feb | Lot 34 Stonefly | | | 0 | 0 | 6 | 7 | 0.68 | 141 | 0.1 | 300 | | |
| | Average | 0 | 0 | 0 | 0 | 4.8 | 7.2 | 0.54 | 141.0 | 0.1 | 302.8 | 0.00 | 0.022 |
| | Maximum | 0 | 0 | 0 | 0 | 6 | 7.3 | 0.68 | 142 | 0.1 | 305 | 0 | 0.022 |
| | Minimum | 0 | 0 | 0 | 0 | 4 | 7 | 0.45 | 140 | 0.1 | 300 | 0 | 0.022 |

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|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 03-Mar | 1969 Kaye Rd | 0 | 0 | 0 | 0 | 4 | 7 | 0.53 | 140 | 0.1 | 301 | 0.01 | 0.025 |
| 10-Mar | Lot 34 Stonefly | | | 0 | 0 | 6 | 7.3 | 0.71 | 141 | 0.1 | 301 | | |
| 18-Mar | 1969 Kaye Rd | | | 0 | 0 | 5 | 7.1 | 0.73 | 142 | 0.1 | 300 | | |
| 25-Mar | Lot 34 Stonefly | | | 0 | 0 | 6 | 7.3 | 0.53 | 149 | 0.1 | 314 | | |
| | Average | 0 | 0 | 0 | 0 | 5.3 | 7.2 | 0.63 | 143.0 | 0.1 | 304.0 | 0.01 | 0.025 |
| | Maximum | 0 | 0 | 0 | 0 | 6 | 7.3 | 0.73 | 149 | 0.1 | 314 | 0.01 | 0.025 |
| | Minimum | 0 | 0 | 0 | 0 | 4 | 7 | 0.53 | 140 | 0.1 | 300 | 0.01 | 0.025 |

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Englishman River Estates Water Analysis - Monthly Report



| Date Apr-09 | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|------------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 15-Apr | 1969 Kaye Rd | 0 | 0 | | | | | | | | | | |
| 22-Apr | Lot 34 Stonefly | | | 0 | 0 | 8 | 7 | 0.41 | 150 | 0.1 | 316 | | |
| 29-Apr | 1969 Kaye Rd | | | | | 8 | 6.9 | 0.16 | 149 | 0.1 | 313 | | |
| | Average | 0 | 0 | 0 | 0 | 8.0 | 7.0 | 0.29 | 149.5 | 0.1 | 314.5 | #DIV/0! | #DIV/0! |
| | Maximum | 0 | 0 | 0 | 0 | 8 | 7 | 0.41 | 150 | 0.1 | 316 | 0 | 0 |
| | Minimum | 0 | 0 | 0 | 0 | 8 | 6.9 | 0.16 | 149 | 0.1 | 313 | 0 | 0 |

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|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 05-May | 1969 Kaye Rd | 0 | 0 | 0 | 0 | 8 | 7 | 0.33 | 151 | 0.1 | 319 | 0.01 | 0.043 |
| 12-May | Lot 34 Stonefly | | | 0 | 0 | 9 | 7 | 0.46 | 152 | 0.2 | 321 | | |
| 27-May | 1969 Kaye Rd | | | 0 | 0 | 11 | 7.1 | 0.63 | 153 | 0.2 | 323 | | |
| | Average | 0 | 0 | 0 | 0 | 9.3 | 7.0 | 0.47 | 152.0 | 0.2 | 321.0 | 0.01 | 0.043 |
| | Maximum | 0 | 0 | 0 | 0 | 11 | 7.1 | 0.63 | 153 | 0.2 | 323 | 0.01 | 0.043 |
| | Minimum | 0 | 0 | 0 | 0 | 8 | 7 | 0.33 | 151 | 0.1 | 319 | 0.01 | 0.043 |

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|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 02-Jun | 1969 Kaye Rd | 0 | 0 | 0 | 0 | 13 | 7.2 | 0.76 | 155 | 0.2 | 324 | 0.03 | 0.048 |
| 09-Jun | Lot 34 Stonefly | | | 0 | 0 | 11 | 7 | 0.63 | 155 | 0.2 | 325 | | |
| | | | | | | | | | | | | | |
| | Average | 0 | 0 | 0 | 0 | 12.0 | 7.1 | 0.70 | 155.0 | 0.2 | 324.5 | 0.03 | 0.048 |
| | Maximum | 0 | 0 | 0 | 0 | 13 | 7.2 | 0.76 | 155 | 0.2 | 325 | 0.03 | 0.048 |
| | Minimum | 0 | 0 | 0 | 0 | 11 | 7 | 0.63 | 155 | 0.2 | 324 | 0.03 | 0.048 |

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Regional District of Nanaimo - Utilities Department

Englishman River Estates Water Analysis - Monthly Report



| Date | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 07-Jul | 1969 Kaye Rd | 0 | 0 | 0 | 0 | 14 | 6.7 | 0.45 | 158 | 0.2 | 332 | 0.01 | 0.084 |
| 15-Jul | Lot 34 Stonefly | | | 0 | 0 | 13 | 7 | 0.26 | 159 | 0.2 | 334 | | |
| 29-Jul | 1969 Kaye Rd | | | 0 | 0 | 16 | 7.1 | 0.3 | 162 | 0.2 | 341 | | |
| | Average | 0 | 0 | 0 | 0 | 14.3 | 6.9 | 0.34 | 159.7 | 0.2 | 335.7 | 0.01 | 0.084 |
| | Maximum | 0 | 0 | 0 | 0 | 16 | 7.1 | 0.45 | 162 | 0.2 | 341 | 0.01 | 0.084 |
| | Minimum | 0 | 0 | 0 | 0 | 13 | 6.7 | 0.26 | 158 | 0.2 | 332 | 0.01 | 0.084 |

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Englishman River Estates Water Analysis - Monthly Report



| Date Aug-09 | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|------------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 05-Aug | 1969 Kaye Rd | 0 | 0 | 0 | 0 | 18 | 7 | 0.48 | 162 | 0.2 | 341 | 0.02 | 0.027 |
| 12-Aug | Lot 34 Stone Fly | | | 0 | 0 | 12 | 7.2 | 0.43 | 163 | 0.2 | 341 | | |
| 19-Aug | 1969 Kaye Rd | | | 0 | 0 | 16 | 7.2 | 0.32 | 168 | 0.2 | 354 | | |
| 25-Aug | 1969 Kaye Rd | | | 0 | 0 | 15 | 7.1 | 0.23 | 167 | 0.2 | 349 | | |
| | Average | 0 | 0 | 0 | 0 | 15.3 | 7.1 | 0.37 | 165.0 | 0.2 | 346.3 | 0.02 | 0.027 |
| | Maximum | 0 | 0 | 0 | 0 | 18 | 7.2 | 0.48 | 168 | 0.2 | 354 | 0.02 | 0.027 |
| | Minimum | 0 | 0 | 0 | 0 | 12 | 7 | 0.23 | 162 | 0.2 | 341 | 0.02 | 0.027 |

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Regional District of Nanaimo - Utilities Department

Englishman River Estates Water Analysis - Monthly Report



| Date Sep-09 | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|------------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 01-Sep | 1969 Kaye Road | 0 | 0 | | | | | 0.61 | | | | | |
| 15-Sep | Lot 34 Stonefly | | | 0 | 0 | 12 | 7.2 | 0.46 | 166 | 0.2 | 347 | | |
| 22-Sep | 1969 Kaye Road | | | 0 | 0 | 15 | 7 | 0.34 | 164 | 0.2 | 344 | | |
| 29-Sep | 1969 Kaye Road | | | 0 | 0 | 13 | 7.1 | 0.37 | 165 | 0.2 | 376 | | |
| | Average | 0 | 0 | 0 | 0 | 13.3 | 7.1 | 0.45 | 165.0 | 0.2 | 355.7 | #DIV/0! | #DIV/0! |
| | Maximum | 0 | 0 | 0 | 0 | 15 | 7.2 | 0.61 | 166 | 0.2 | 376 | 0 | 0 |
| | Minimum | 0 | 0 | 0 | 0 | 12 | 7 | 0.34 | 164 | 0.2 | 344 | 0 | 0 |

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|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 05-Oct | 1969 Kaye Rd | 0 | 0 | 0 | 0 | 15 | 7.4 | 0.39 | 165 | 0.2 | 347 | | |
| 14-Oct | Lot 34 Stonefly | | | 0 | 0 | 11 | 6.9 | 0.28 | 163 | 0.2 | 341 | | 0.05 |
| 20-Oct | 1969 Kaye Rd | | | 0 | 0 | 13 | 6.9 | 0.024 | 164 | 0.2 | 344 | | |
| 28-Oct | Lot 34 Stonefly | | | 0 | 0 | 11 | 7.4 | 0.28 | 165 | 0.2 | 348 | | |
| | Average | 0 | 0 | 0 | 0 | 12.5 | 7.2 | 0.24 | 164.3 | 0.2 | 345.0 | #DIV/0! | 0.05 |
| | Maximum | 0 | 0 | 0 | 0 | 15 | 7.4 | 0.39 | 165 | 0.2 | 348 | 0 | 0.05 |
| | Minimum | 0 | 0 | 0 | 0 | 11 | 6.9 | 0.024 | 163 | 0.2 | 341 | 0 | 0.05 |

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|--------|---------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 04-Nov | 1969 Kaye Rd | 0 | 0 | 0 | 0 | 11 | 7 | 0.24 | 165 | 0.2 | 347 | 0.01 | 0.039 |
| 10-Nov | Lot 34 Stonefly | | | 0 | 0 | 10 | 7 | 0.31 | 164 | 0.2 | 346 | | |
| 17-Nov | 1969 Kaye Rd | | | 0 | 0 | 9 | 7.1 | 0.25 | 164 | 0.2 | 345 | | |
| 24-Nov | Lot 34 Stonefly | | | 0 | 0 | 9 | 7.3 | 0.32 | 163 | 0.2 | 345 | | |
| | Average | 0 | 0 | 0 | 0 | 9.8 | 7.1 | 0.28 | 164.0 | 0.2 | 345.8 | 0.01 | 0.039 |
| | Maximum | 0 | 0 | 0 | 0 | 11 | 7.3 | 0.32 | 165 | 0.2 | 347 | 0.01 | 0.039 |
| | Minimum | 0 | 0 | 0 | 0 | 9 | 7 | 0.24 | 163 | 0.2 | 345 | 0.01 | 0.039 |

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| Date Dec-09 | Sample Location (Address) | Fecal Coli * Health Dep | Total Coli * Health Dep | Total Coli RDN | E Coli RDN | Temp ° C | pH | Cl ₂ ppm | TDS ppm | Sal % | Cond uS/cm | Fe ppm | Mn ppm |
|----------------|------------------------------|----------------------------|----------------------------|-------------------|---------------|-------------|-----|------------------------|------------|----------|---------------|-----------|-----------|
| 02-Dec | 1969 Kaye Rd | 0 | 0 | 0 | 0 | 8 | 7.2 | 0.24 | 163 | 0.2 | 347 | 0.04 | 0.042 |
| 08-Dec | 1969 Kaye Rd | | | 0 | 0 | 7 | 7.4 | 0.13 | 164 | 0.2 | 348 | | |
| 22-Dec | Lot 34 Stonefly | | | 0 | 0 | 7 | 7.4 | 0.37 | 163 | 0.2 | 345 | | |
| 30-Dec | 1969 Kaye Rd | | | 0 | 0 | 6 | 7.3 | 0.31 | 162 | 0.2 | 343 | | |
| | Average | 0 | 0 | 0 | 0 | 7.0 | 7.3 | 0.26 | 163.0 | 0.2 | 345.8 | 0.04 | 0.042 |
| | Maximum | 0 | 0 | 0 | 0 | 8 | 7.4 | 0.37 | 164 | 0.2 | 348 | 0.04 | 0.042 |
| | Minimum | 0 | 0 | 0 | 0 | 6 | 7.2 | 0.13 | 162 | 0.2 | 343 | 0.04 | 0.042 |

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Englishman River Distribution Water Analysis Results

Location: 1969 Kaye Road

Canadian Drinking Water Guidelines Package

MAC=Maximum Acceptable Concentration IMAC=Interim Maximum Acceptable Concentration AO=Aesthetic Objective

CDWG=Canadian Drinking Water Guidelines BCAWQG=British Columbia Approved Water Quality Guidelines

Red font indicates non-compliance with Canadian Drinking Water Guidelines

| Parameters | Water Quality Guidelines | | | | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 20-Apr 2005 | 17-May 2006 | 22-May 2007 | 27-May 2008 | 13-May 2009 | 2010 |
|-------------------|--------------------------|---------|---------|-----------|------|------|------|------|------|------|----------------|----------------|----------------|----------------|----------------|------|
| | Units | CDWG | BCAWQG | | | | | | | | | | | | | |
| Color | CU | 15 | <=15 | AO | | | | | | | <5 | <5 | 14 | <5 | 8 | |
| Conductivity | uS | | 700 | MAC | | | | | | | 283 | 286 | 300 | 318 | 340 | |
| TDS | mg/L | 500 | <=500 | AO | | | | | | | 150 | 167 | 164 | 186 | 222 | |
| Hardness (CaCO3) | mg/L | 80-100 | <=500 | AO | | | | | | | 130 | 130 | 140 | 130 | 160 | |
| pH | pH units | 6.5-8.5 | 6.5-8.5 | AO | | | | | | | 8.1 | 8.3 | 8.2 | 8.24 | 8.2 | |
| Turbidity | NTU's | 5 | 1 | MAC | | | | | | | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | |
| Alkalinity | mg/L | | | | | | | | | | 140 | 150 | 130 | 130 | 130 | |
| Chloride | mg/L | 250 | <=250 | AO | | | | | | | 4.4 | 6.6 | 10.7 | 14.9 | 23.4 | |
| Fluoride | mg/L | 1.5 | 1.5 | MAC | | | | | | | <1.0 | 0.1 | <1.0 | <1.0 | <1.0 | |
| Sulfate | mg/L | 500 | <=500 | AO | | | | | | | 6.8 | 9.1 | 8.4 | 7.3 | 8.3 | |
| Nitrate | mg/L | 10 | 10 | MAC | | | | | | | <0.1 | <0.01 | <0.1 | <0.1 | <0.1 | |
| Nitrite | mg/L | 1 | | | | | | | | | <0.1 | <0.01 | <0.1 | <0.1 | 0.1 | |
| T-Aluminum | mg/L | | 0.2 | MAC | | | | | | | <0.005 | <0.005 | <0.005 | <0.05 | <0.005 | |
| T-Antimony | mg/L | | 0.006 | MAC | | | | | | | <0.0002 | <0.0002 | <0.0002 | <0.001 | <0.0002 | |
| T-Arsenic | mg/L | 0.025 | 0.025 | IMAC | | | | | | | 0.002 | 0.0017 | 0.0017 | 0.004 | 0.0017 | |
| T-Barium | mg/L | 1.0 | 1 | MAC | | | | | | | 0.018 | 0.018 | 0.019 | 0.02 | 0.021 | |
| T-Boron | mg/L | 5.0 | 5 | MAC | | | | | | | 0.033 | 0.033 | 0.038 | <0.02 | 0.04 | |
| T-Cadmium | mg/L | 0.005 | | | | | | | | | <0.00001 | <0.00001 | <0.00001 | <0.0003 | <0.00001 | |
| T-Calcium | mg/L | | | | | | | | | | 32 | 32.4 | 34.4 | 31.2 | 40 | |
| T-Chromium | mg/L | 0.05 | 0.05 | MAC | | | | | | | <0.0005 | <0.0005 | <0.0005 | <0.003 | <0.0004 | |
| T-Copper | mg/L | 1.0 | <=1 | MAC | | | | | | | 0.006 | 0.001 | 0.005 | <0.005 | 0.004 | |
| T-Iron | mg/L | 0.3 | <=0.3 | AO | | | | | | | <0.1 | <0.1 | <0.1 | <0.05 | <0.01 | |
| T-Lead | mg/L | 0.01 | 0.01 | MAC | | | | | | | 0.0005 | <0.0001 | 0.0002 | <0.0005 | 0.0001 | |
| T-Lithium | mg/L | | | | | | | | | | | | | | <0.001 | |
| T-Magnesium | mg/L | | <=700 | AO | | | | | | | 11.6 | 11 | 12.2 | 11.4 | 13.8 | |
| T-Manganese | mg/L | 0.05 | <=0.05 | AO | | | | | | | 0.01 | 0.014 | 0.014 | 0.018 | 0.0222 | |
| T-Mercury | mg/L | 0.001 | 0.001 | MAC | | | | | | | <0.0002 | <0.0001 | <0.0001 | <0.01 | <0.01 | |
| T-Nickel | mg/L | | | | | | | | | | | | | | <0.001 | |
| T-Phosphorus | mg/L | | | | | | | | | | | | | | 0.027 | |
| T-Potassium | mg/L | | | | | | | | | | 0.8 | 1 | 1.1 | 1 | 1.4 | |
| T-Selenium | mg/L | 0.01 | 0.01 | MAC | | | | | | | <0.0002 | <0.0002 | <0.0002 | 0.003 | <0.0006 | |
| T-Silver | mg/L | | | | | | | | | | | | | | <0.00001 | |
| T-Sodium | mg/L | 200 | <=200 | AO | | | | | | | 11 | 11.4 | 12.7 | 13.8 | 14.7 | |
| T-Uranium | mg/L | 0.1 | 0.1 | MAC | | | | | | | <0.0005 | <0.0005 | <0.0005 | <0.002 | <0.0004 | |
| T-Zinc | mg/L | 5 | <5 | AO | | | | | | | 0.006 | 0.003 | 0.011 | <0.005 | 0.01 | |
| Total Coliform | cfu/100ml | <1 | <1 | cfu/100ml | | | | | | | <1 | <1 | <1 | <1.0 | <1.0 | |
| Fecal Coliform | cfu/100ml | <1 | <1 | cfu/100ml | | | | | | | <1 | <1 | <1 | <1.0 | <1.0 | |
| E.coli | cfu/100ml | <1 | <1 | cfu/100ml | | | | | | | | <1 | <1 | <1.0 | <1.0 | |
| Tannins & Lignins | | | | | | | | | | | n/a | n/a | | | | |
| Trihalomethanes | mg/l | 0.1 | | MAC | | | | | | | n/a | 0.002 | | | | |

APPENDIX C

EMERGENCY RESPONSE PLAN

* Emergency Response Plan not included in Public Copy.