



WHISKEY CREEK

Water Service Area Annual Report 2011

Prepared by:



REGIONAL
DISTRICT
OF NANAIMO

REGIONAL DISTRICT OF NANAIMO

Water Services Department

June 2012



Table of Contents

1. Introduction.....	1
2. Whiskey Creek Water System	1
2.1 Source Water	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. Water Consumption	3
7. Maintenance Program.....	3
8. Water Service Area Projects.....	4
8.1 2011 Completed Studies & Projects.....	4
8.2 2012 Proposed Projects & Upgrades.....	4
9. Emergency Response Plan.....	4
10. Cross Connection Control.....	5
11. Closing	5

Appendix A - Map of Whiskey Creek Water Service Area

Appendix B - Water Quality Testing Results

Appendix C - Emergency Response Plan

1. Introduction

The following annual report describes the Whiskey Creek Water 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. Whiskey Creek Water System

The Whiskey Creek water system was constructed in the 1970s and was initially operated by the Subdivision Developer, Westerlea Estates Ltd. The water system is located eight kilometres southwest of Qualicum Beach on the south side of Highway 4. There are 121 residential lots connected to the water system. Since the year 2000, an elected committee has been responsible for the operation and maintenance of the system. The elected committee formed the Whiskey Creek Water District and consisted of three part-time operators. Local contractors were hired for repairs and improvements when required. In January 2011, at the request of local residents and after a successful petition process, the ownership and operation of the Whiskey Creek Water District was transferred to the RDN. A map of the Whiskey Creek Water Service Area is provided in Appendix A for reference.

2.1 Source Water

Two water licences allow surface water to be extracted from nearby Crocker Creek. An emergency backup generator is available in the event of a power failure. Water from Crocker Creek is temporarily stored in a raw water storage pond next to the pumphouse on Hebert Road. Perforated pipe under the bed of the pond carries water into a concrete wet well containing two submersible pumps. These pumps deliver water through a pressure filter to a water storage reservoir. The water is dosed with chlorine and a polymer upstream of the filter. Drinking water is pumped into the water system via two booster pumps.

2.2 Reservoirs

One service reservoir (concrete) is present at 979 Poplar Way, and has a capacity of 195 m³ (43,000 imperial gallons).

2.3 Distribution System

The water distribution system in Whiskey Creek is summarized in the table below. There are 9 fire hydrants and 4 flush-outs in the system.

Watermain Material	Length of mains in Whiskey Creek Water Service Area	Prevalence in Water Service Area
<u>Asbestos-concrete:</u> 100mm or smaller	1,280 m	40%
150mm or larger	1,920 m	60%

3. Water Sampling and Testing Program

Water sampling and testing was carried out by the Whiskey Creek Water District operators (not the RDN) until February 2011. A limited amount of historic test results are available, and are attached in Appendix B of this report. In 2012, the proposed water sampling program by RDN staff is given in the table below.

Timing	Location	Tests
Weekly	BC Centre for Disease Control	Total coliforms, E.Coli
Weekly	RDN (in-house) Laboratory	Total coliforms, E.Coli Temperature, pH, Conductivity Chlorine residual, Salinity, TDS Monthly- Total Iron and Manganese
Quarterly	North Island Labs	Trihalomethanes (THMs), Total coliforms, and E.Coli at the reservoir site
Annual Source Water Testing (every Fall)	North Island Labs	Complete potability testing of raw source water incl. tannins and lignins
Annual System Water Testing (every Spring)	North Island Labs	Complete potability testing of distribution system water incl. tannins, lignins, Giardia, and Cryptosporidium

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

Very few complaints were received from the Whiskey Creek water service area in 2011. Inquiries were related to water meters, water billing, and watering restrictions.

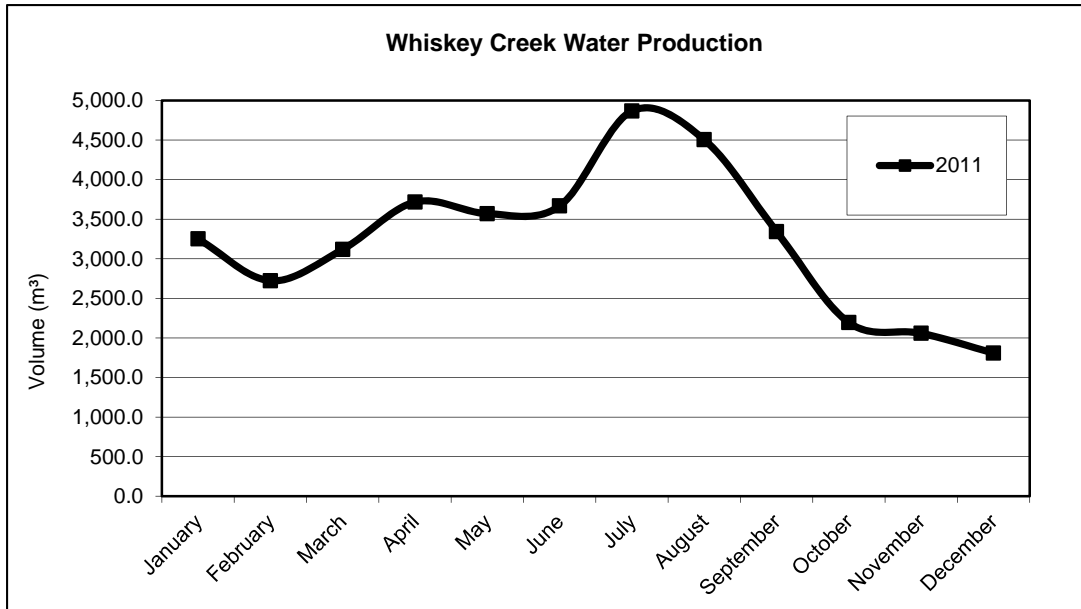


Intersection of Brittain Blvd and Poplar Way in Whiskey Creek

6. Water Consumption

According to the *Asset Condition Report (2009)* provided by Norm Winton, P.Eng., the average annual water consumption in Whiskey Creek is 407 L/day/capita, based on an estimated population of 250 people. This consumption is slightly higher than the RDN system average of 269 L/day/capita in 2011. The report further indicates that several homes have swimming pools that are filled from the distribution system, but only 10% of residents water their lawn.

The chart below shows the 2011 flow meter data from the Whiskey Creek pumphouse.



Consumption

Water meters were installed at each Whiskey Creek residence in October/November 2011. In this regard, no annual residential water usage patterns are available for 2011, but will be included in next year’s Annual Water System Report for Whiskey Creek.

7. Maintenance Program

Daily pump station inspections are 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 (9) are serviced once per year (either ‘A-level’ or ‘B-level’ maintenance) in the Fall. Twenty-four hour on-call coverage is in place to respond to water system emergencies and alarms.

Homeowners in the Whiskey Creek Water Service Area were notified in early 2011 that the fire hydrants in this system cannot be relied on for fire insurance purposes due to insufficient supply and capacity for fire flows. Upgrades to water supply volumes and reservoir storage may be required in the future, but would not proceed without community support and financing.

8. Water Service Area Projects

8.1 2011 Completed Studies & Projects

- Finalized RDN water system ownership and acquired water licenses on Crocker Creek;
- Commenced RDN operation of the Whiskey Creek Water System;
- Established the Whiskey Creek Water Service Area Rates & Regulations Bylaws;
- Installed water meters at each property/residence;
- Updated the Emergency Response Plan;
- Applied a low-flush toilet incentive;
- Maintained excellent customer complaint and service request response times; and
- Maintained quality control through regular testing and monitoring of the water system.

8.2 2012 Proposed Projects & Upgrades

- Install a control panel at the raw water station;
- Undertake berm repairs at the raw water station;
- Install alarms at the pumphouse and reservoir site, along with communication lines to the RDN Utilities office;
- Install stand-alone water sampling stations;
- Install a Water Conservation Level sign with an arrow indicator;
- Enforce the outdoor sprinkling regulations;
- Include Whiskey Creek in the Draft Cross Connection Control bylaws;
- Complete the Cross-Connection Control bylaws, and establish a procedure for reviewing commercial and industrial properties for water system risks;
- Carry out a comprehensive water conservation campaign (Team WaterSmart);
- Update and improve 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;
- Apply a rainwater harvesting (rain barrel) incentive;
- Update the Standard Operating Procedures;
- Continue quality control through regular testing and monitoring of the water system; 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 updated in 2011, and copies of the ERP 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 at the RDN in 2007. Cross connection controls imposed in the Whiskey Creek Water System in 2011 include dual check valves installed at each service connection (121), mandatory fire hydrant use permits, and the creation of a water supply bylaw noting discontinued service if a threat to the water supply is perceived by staff.

The Draft Cross-Connection Control Bylaw 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

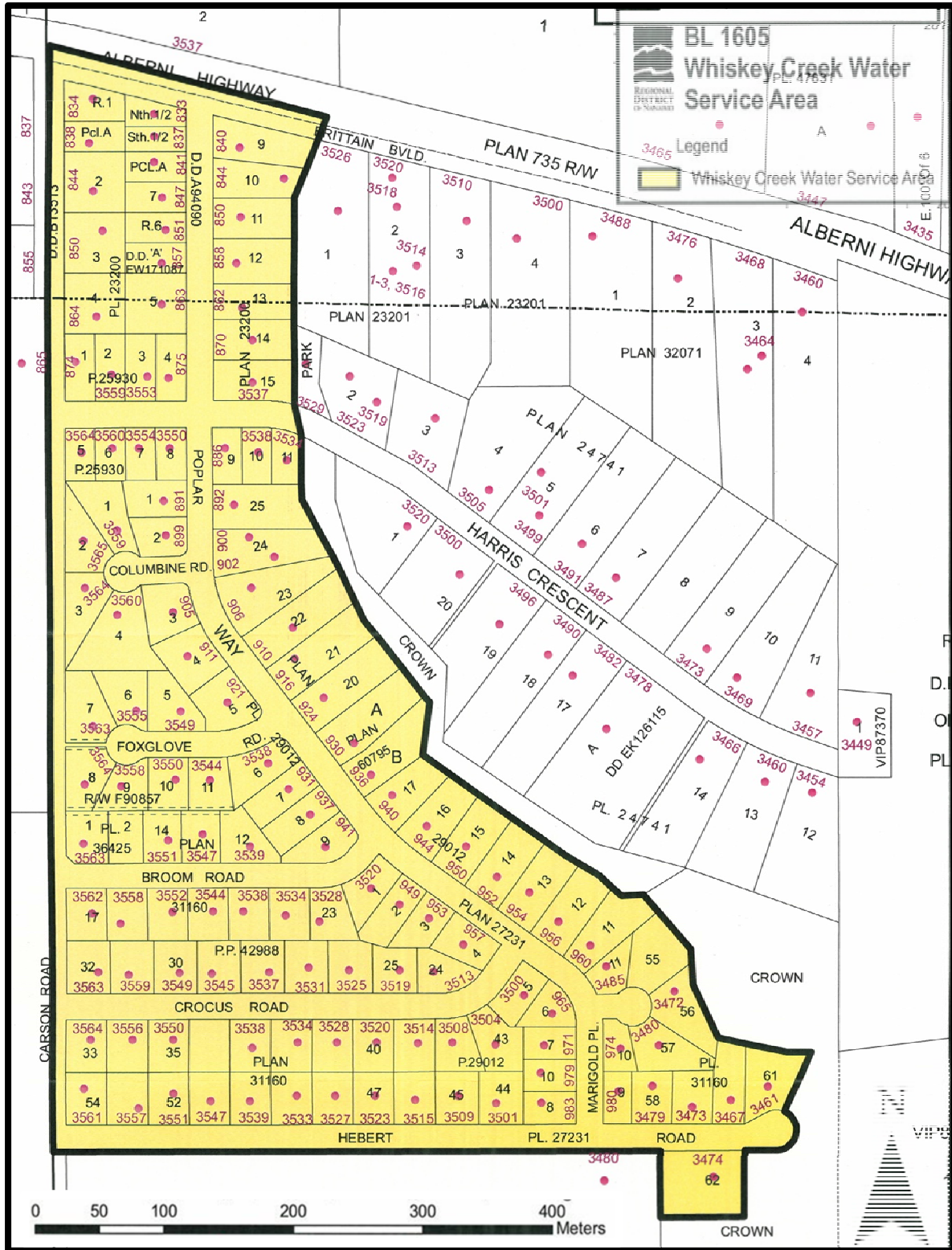
An annual report for the year 2012 will be prepared and submitted to the Vancouver Island Health Authority in the Spring of 2013. Annual reports are also available on our website at www.rdn.bc.ca in the SERVICES section, under “Water & Utility Services” then “WaterSmart Communities”.

APPENDIX A

MAP OF WHISKEY CREEK

WATER SERVICE AREA

WHISKEY CREEK WATER SERVICE AREA



APPENDIX B

WATER QUALITY TESTING RESULTS