2014 Performance Report

FRENCH CREEK

2014 PERFORMANCE HIGHLIGHTS

EPCOR

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OPERATIONAL EXCELLENCE

Operational Excellence is a philosophy of leadership, teamwork and problem solving resulting in continuous improvement throughout the organization by focusing on the needs of the customer, empowering employees, and optimizing existing activities in the process. Operational excellence includes activities related to the environment, quality assurance, customer care and community, safety, and capital projects. This report will highlight our achievements from 2014 and outline opportunities we are pursuing in 2015.

ABOUT THE UTILITY

EPCOR French Creek is a Class III Water Treatment Plant as designated through the Provincial Environmental Operators Certification Program, in recognition of our employees' qualifications.

Water Quality in French Creek exceeds the Guidelines for Canadian Drinking Water and those set out by the BC Comptroller of Water Rights. This is the standard that we set out to achieve every day of the year.

In 2014, French Creek obtained its drinking water from a total of 16 active wells in four well fields. The aquifers in the area provide good-quality drinking water. The water is chlorinated before it enters EPCOR's storage reservoirs.

Measuring Success

We work to ensure the performance of the utility meets the consistently high standards that French Creek residents expect. This report is part of our commitment to accountability and transparency.

In each community where we work, we are accountable to deliver service that meets key measures for Environment, Customer Care, Safety, Quality Assurance, Operational Excellence and Capital Programs. We work closely with our regulators the BC Water Comptroller's Office and the Vancouver Island Health Authority (VIHA). The Capital program and operations budgets are approved by the BC Water Comptrollers Office and detailed reporting is submitted to both regulators.

2014 HIGHLIGHTS

In 2014, EPCOR drilled six new wells and brought a replacement well into service. This allowed us to shut off the creek as a water source, eliminating the need to rely on surface water and benefitting the French Creek watershed and aquatic environment. The last use of the French Creek surface water source was in 2012.

Over 6,500 tests performed in 2014 confirmed that the community's drinking water met or exceeded regulated standards for safety, reliability and quality. These results are shared in this report.

WATER QUALITY & QUALITY ASSURANCE

Since EPCOR began operating the French Creek Utility in May 2006, we have made significant improvements in the area of quality assurance. This includes the construction of the Drew Road Water Treatment Plant, continued maintenance programs and increased water quality monitoring.

Our employees work to ensure that your drinking water meets or exceeds standards for safety, reliability and quality. This year, EPCOR carried out over 6,500 water quality tests. All testing showed that French Creek's drinking water successfully met both Health Canada and BC water quality regulatory requirements.

We measure water quality by analyzing the physical, chemical and microbial properties of the water. This is carried out under Health Canada Guidelines. They set out the maximum acceptable concentrations of chemical, microbial and radiological contaminants found in water. The guidelines also address aesthetic water quality considerations such as colour, taste and odour.

Tests at various levels and for different parameters are conducted daily, weekly and monthly. In 2014 EPCOR tested for chlorine residual, turbidity, conductivity, temperature, iron, manganese and microbial contaminants, as well as various other external laboratory tests.

Not only do our local operators test and calibrate the equipment used in reporting water quality results daily, but certified technicians also test all water lab equipment annually. In addition, EPCOR continues to monitor the distribution system through the eight sample locations chosen in conjunction with the VIHA Drinking Water Coordinator.

We report our quality assurance, environmental, safety and security data and information to VIHA for review. VIHA must be satisfied that French Creek's drinking water successfully meets all water quality regulatory requirements, including microbial requirements.

The following tables provide detailed information on the sampling and testing completed in 2014.

Physical and Chemical Water Quality Data for French Creek Source and Distribution Water for 2014

Parameter	Unit of Measure	Annual Minimum	Annual Maximum	Annual Average	GCDWQ Guidelines
BACTERIA					
E. Coli	CFU/100mL	<1	<1	<1 GM	0
Total Coliforms	CFU/100mL	<1	<1	<1 GM	0
DISINFECTION-BY-PRODUCTS					
Trihalomethanes	mg/L	0.04	0.074	0.058	0.1
Haloacetic Acid	mg/L	0.0243	0.0478	0.0342	0.08
OTHER					
Free Chlorine	mg/L	0.2	1.39	0.72	NA
pH		6.4	8.6	7.6	6.5-8.5 (AO)
Temperature	°C	7	23	12	15 (AO)
Turbidity	NTU	0.08	0.68	0.2	1

How to Measure:

- Most substances listed are reported in milligrams per litre (mg/L). One milligram per litre is commonly referred to as one part per million.
- One part per million is equivalent to one drop in 1/2 bathtub full of water or one second in 12.5 days.
- Some substances are measured in parts per billion. One part per billion is also referred to as one microgram per litre (µg/L).
- One part per billion is equivalent to one drop in 520 bathtubs full of water or one second in 32 years.

Physical and Chemical Water Quality Data for French Creek Source and Distribution Water for 2014

Substance	Unit of Measure	Annual Minimum	Annual Maximum	Annual Average	Guidelines[1]
TRACE METALS					
Aluminum	mg/L	<0.005	<0.005	<0.005	0.1/0.2 (AO)
Antimony	mg/L	<0.0001	<0.0001	<0.0001	0.006
Arsenic	mg/L	0.00029	0.00037	0.000324	0.01
Barium	mg/L	0.0104	0.0154	0.01364	1
Boron	mg/L	0.01	0.042	0.0232	5
Calcium	mg/L	41.8	45.8	43.74	NA
Chromium	mg/L	0.0001	0.0014	0.00085	0.05
Cobalt	mg/L	<0.0001	<0.0001	<0.0001	NA
Copper	mg/L	0.0131	0.072	0.03552	≤1.0 (AO)
Iron	mg/L	0.003	0.01	0.0062	0.3 (AO)
Lead	mg/L	0.0002	0.002	0.00076	0.01
Magnesium	mg/L	17	19.8	18.46	NA
Manganese	mg/L	0.0022	0.0022	0.0022	0.05 (AO)
Nickel	mg/L	0.0009	0.0009	0.0009	NA
Potassium	mg/L	0.8	2.1	1.3	NA
Selenium	mg/L	<0.0001	<0.0001	0.0001	0.01
Silicon	mg/L	13	13.8	13.52	NA
Sodium	mg/L	9.1	19.8	12.96	200
Uranium	mg/L	<0.00001	<0.00001	<0.00001	NA
Thallium	mg/L	<0.0001	<0.0001	<0.0001	NA
Tin	mg/L	<0.0005	<0.0001	<0.0005	NA
Titanium	mg/L	0.00006	<0.0005	0.000158	NA
Vanadium	mg/L	0.0017	0.00025	0.00322	0.0036
Zinc	mg/L	0.005	0.0041	0.011	≤5.0 (AO)
Zirconium	mg/L	<0.0005	<0.0005	<0.0005	NA

ABBREVIATIONS	
-	No guidance set by Health Canada
<	Less than detection limit
>	More than detection limit
ACU	Apparent Color Unit
AO	Aesthetic Objective
AS caCO3	expressed as Calcium Carbonate
GCDWQ	Guidelines for Canadian Drinking Water Quality
GM	Gross Mean
HAA	Haloecetic Acids
MAC	Maximum Acceptable Concentration
mg/L	Miligram per Litre
N	Nitrogen
NA	not applicable
ng/L	Nanograms per Litre
NTU	Nephelometric Turbidity Unit
µg/L	Micrograms per Litre
µS/cm	Microsiemens per Centimetre
TCU	True Color Unit
THMs	Trihalomethanes

[1]The Guideline is either the Maximum Acceptable Concentration (MAC), the Aesthetic Objective (AO) or the operational guidelines (OG) as per the Guidelines for Canadian Drinking Water Quality established by Health Canada. Dash indicates no guideline established.

Summary of Total Coliform and Chlorine Residual

Sampling Location	Samples Collected in 2014	Total Coliform CFU/100ml max	*e.coli* CFU/100 ml max	Low Chlorine Residual mg/L
1759 Admiral Tyron	24	<1	<1	0.2
736 Kasba Circle	24	<1	<1	0.6
Mallard Road	24	<1	<1	0.21
522 Hawthorn Rise	24	<1	<1	0.96
803 Woodland Drive	24	<1	<1	0.52
French Creek House	24	<1	<1	0.56
Windsor Plywood	24	<1	<1	0.62
Mid Island Co-op	24	<1	<1	0.21
Drew Road Filter #1	12	<1	<1	0.21
Drew Road Filter #2	12	<1	<1	0.16
Drew Road Filter #3	12	<1	<1	0.22

SAFETY

Ensuring the safety of our customers and our employees is a top priority for EPCOR, as is our commitment to environmental stewardship.

When it comes to safety, EPCOR is pleased to again report zero lost-time incidents in 2014. EPCOR French Creek also met all its internal Safety Key Performance Measures for leadership hazard management, monitoring and training. This past year training highlights included Ground Disturbance, Fall Protection, Workplace Hazardous Materials Information System (WHMIS), Transportation of Dangerous Goods, Environmental Management Compliance and Root Cause Analysis.

The site's Emergency Response Plan is reviewed quarterly and updated annually. Monthly safety meetings, safe work plans, tailgate talks and work site inspections also contribute to our strong safety culture.

One of our environmental accomplishments in 2014 was no reportable environmental incidents or injuries for an eighth consecutive year.

CUSTOMER CARE & COMMUNITY

Our customers are the reason we work in our community and this drives us to achieve the highest customer standards possible. We understand the importance our customers place on reliable water service, therefore, we are available around-the-clock for emergencies. EPCOR responded to and resolved 17 outages in the French Creek in 2014. EPCOR French Creek restored all water outages within six hours.

COMMUNITY ADVISORY PANEL

French Creek's Water Community Advisory Panel (CAP) brings together people representing a variety of viewpoints within the community to share information and gather stakeholder input on initiatives and emerging issues. EPCOR benefits from hearing first-hand from these volunteers who commit to a two-year term and meet three to four times annually.

In 2014 we saw one CAP group end and another group begin. Discussions centered on providing information about the existing system, regulatory requirements for the water utility and the rates application.

EPCOR IN THE COMMUNITY

EPCOR supports the communities where we work through initiatives that fall in line with our three community investment pillars, namely **Water** (Food), **Energy** (Shelter and Safety), and **Education**. This is a natural extension of the essential services that we provide. A number of opportunities exist to obtain support for initiatives, programs and events that enhance the community's quality of life. This includes our EPCOR Community Essentials Council (ECEC) and our Helping Hands grant program that supports community service organizations for which staff volunteer. Our efforts in French Creek, through donations and volunteering, help create stronger communities and healthy families. Community activities in 2014 included:

- Pacific Salmon Foundation Oceanside Dinner, Dance and Auction
- Parksville Beach Society - Canadian Open Sandsculpting Competition
- Qualicum Beach Fire & Ice Festival
- United Way
- Local Food Bank

Looking ahead, EPCOR French Creek will continue to support great organizations that are making a difference in our community.

CAPITAL PROGRAM

Our expertise in managing utilities was demonstrated in 2014 through a number of completed and ongoing capital projects. In 2014 we continued our work on the development of new wells for the system. One of these wells was completed and is now online. We expect to connect two more wells to the system in 2015.

We continue to replace aging water meters with more current technology that improves accuracy and efficiency for meter readings and in 2014 we replaced 100 meters.

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