



2013 Annual Performance Report

EPCOR FRENCH CREEK WATER SERVICES

2013 PERFORMANCE HIGHLIGHTS



EPCOR

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EPCOR's Vision

We are committed to protecting public health through the production and delivery of high-quality drinking water and responsible management of wastewater.

To achieve our vision, we focus on:

People and safety: Be a place where people choose to work, known for our zero-injury culture and focus on continuous improvement

Operational excellence: Be recognized as an expert in our business by adopting best available technology and solutions that enhance water and power quality, system reliability, and our efficiency and cost-effectiveness

Environment: Make the environment a priority in everything we do

Key Measures of Success

This 2013 Performance Report provides an overview of EPCOR Water (West) Inc. (EPCOR) achievements in French Creek, B.C. and looks ahead to 2014 goals.

We strive to ensure that our performance meets the consistently high standards that French Creek customers expect. We are accountable to deliver service that meets standards for key measures including quality assurance, operational excellence, capital projects, customer care and community, and safety and environment.

Set by EPCOR Water Services, our key measures are submitted to, and our performance is consistent with, the requirements of our regulators: the B.C. Water Comptroller's Office and Vancouver Island Health Authority (VIHA). Capital program and operations budgets are approved by the B.C. Water Comptroller's Office. Detailed reporting is submitted to both the B.C. Water Comptroller's Office and VIHA, as required.



Overview of 2013 Highlights

At EPCOR French Creek, operational excellence takes many forms, from caring for the environment to ensuring safe, quality drinking water and service reliability for our customers.

In 2013, we drilled six new wells and brought a replacement well into service. This allowed us to shut off the creek source, eliminating the need to rely on surface water and benefiting 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 2013 confirmed that the community's drinking water met or exceeded regulated standards for safety, reliability and quality. These results are shared in this report.

Eliminating the Reliance on Surface Water

In 2013, EPCOR continued work to eliminate reliance on surface water. With customers consuming about 70 per cent more water in the summer, up to 17 per cent of surface water from the French Creek watershed was previously required to meet the demand during this peak season. With the new well brought online in 2013, French Creek no longer requires surface water to supplement the production wells during periods of high demand. This provides significant environmental benefit for French Creek where the watershed is only approximately 68 km².



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, such as video examinations of wells, 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 in French Creek. Again, all testing showed that French Creek's drinking water successfully met both Health Canada and B.C. 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 issues such as colour, taste and odour.

Tests at various levels and for different parameters are conducted daily, weekly and monthly. Tests carried out in 2013 included chlorine residual, turbidity, conductivity, temperature, iron, manganese, and microbial contaminants, as well as various other external laboratory tests.

We perform continuous online monitoring of chlorine levels and turbidity. A key test of water quality is the measurement of turbidity, which is the cloudiness or haziness of water caused by suspended solids (similar to smoke in air).

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.

Our 2013 water quality parameters are reported in the following tables. Water quality results are also posted on www.healthspace.ca/viha

Table 1A: Summary of Treated Water Quality Parameters

Substance	Unit of Measure	Min.	Max.	EPCOR's 2013 Average	GCDWQ
Microbiological					
E.Coli	CFU/100mL	<1	<1	<1GM	0
Total Coliforms	CFU/100mL	<1	<1	<1GM	0
Minerals					
Calcium	mg/L	45.9	49.2	47.6	NA
Potassium	mg/L	0.8	2.6	1.7	NA
Sodium	mg/L	8.5	17.6	13.2	200
Organics					
Trihalomethane	mg/L	0.003	0.090	0.049	0.1
Haloacetic Acid	mg/L	0.045	0.045	0.045	0.08
Other					
Free Chlorine	mg/L	0.2	1.3	0.6	NA
pH	pH	6.7	8.4	7.7	6.5 – 8.5 (AO)
Temperature	°C	5	20	12	15(AO)
Turbidity	NTU	<0.1	0.9	0.2	1

Glossary

<	Less than detection limit
ACU	Apparent Colour Unit
N	Nitrogen
TCU	True Colour Unit
GM	Geometric Mean
GCDWQ	Guidelines for Canadian Drinking Water Quality
NTU	Nephelometric Turbidity Unit
µs/cm	Microsiemens
CFU	Colony Forming Unit
AO	Aesthetic Objective

Table 1B: Summary of Treated Water Quality Parameters

Substance	Unit of Measure	Min.	Max.	EPCOR's 2013 Average	GCDWQ
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	0.0003	0.0004	0.0004	0.01
Barium	mg/L	0.011	0.015	0.013	1.0
Boron	mg/L	0.011	0.021	0.016	5.0
Chromium	mg/L	0.0015	0.0015	0.0015	0.05
Cobalt	mg/L	<0.0001	<0.0001	<0.0001	NA
Copper	mg/L	0.018	0.019	0.018	≤1.0(AO)
Iron	mg/L	0.008	0.010	0.009	0.3(AO)
Lead	mg/L	0.0001	0.0003	0.0002	0.01
Magnesium	mg/L	20.5	20.6	20.6	NA
Manganese	mg/L	0.0012	0.0012	0.0012	≤0.05(AO)
Nickel	mg/L	<0.0002	<0.0002	<0.0002	NA
Selenium	mg/L	<0.0001	<0.0001	<0.0001	0.01
Silicon	mg/L	12.8	13.4	13.1	NA
Thallium	mg/L	<0.00001	<0.00001	<0.00001	NA
Tin	mg/L	<0.0001	<0.0001	<0.0001	NA
Titanium	mg/L	<0.0005	<0.0005	<0.0005	NA
Uranium	mg/L	0.00003	0.0003	0.0002	NA
Vanadium	mg/L	0.0005	0.0044	0.0041	0.0036
Zinc	mg/L	0.005	0.0134	0.0092	≤5(AO)
Zirconium	mg/L	<0.0005	0.0005	<0.0005	NA

How to Measure

- 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 half a bathtub full of water or one second in 12.5 days.
- Some substances are measured in parts per billion. One part per billion is equal to one drop in 520 bathtubs full of water or one second in 32 years. One part per billion is also referred to as one microgram per litre (µg/L).



Operational Excellence

Our employees demonstrated operational excellence by meeting or exceeding French Creek's 2013 targets through regular maintenance, evaluations and system improvements documented in this report. Preventive maintenance activities included:

- Unidirectional flushing (UDF) in the spring of 2013 to remove sediment and deposits from the water distribution system.
- Annual inspection and maintenance of all hydrants to ensure fire protection standards are met.

Capital Project Highlights

Our expertise in managing utilities was demonstrated in 2013 through a number of completed and ongoing capital projects. Beyond continued work on the development of six new wells for the system, EPCOR's meter replacement program progressed. The program aims to replace all water meters with more current technology that improves accuracy and efficiency for meter readings. In 2013, we exchanged 100 meters.

Customer Care & Community

Customer Care

When it comes to our customer care philosophy, EPCOR strives to provide more. Providing knowledgeable, timely responses to inquiries, sharing information on the water supply through various channels, and delivering 24-hour, year-round emergency service are just some ways in which EPCOR demonstrates our commitment to our customers.

Since joining the French Creek community, EPCOR has undertaken a number of initiatives to improve customer service and communications. We continue to track all customer inquiries and concerns, as well as inform the community through our website and quarterly newsletter that

include operational updates, efficiency tips and water quality information.

EPCOR also takes pride in supporting the communities where we operate and continued partnering with several organizations that enhance the French Creek area. For 2013, these include: the Parksville Beach Festival Society, the Canadian Open Sand Sculpting Competition, B.C. Firefighter's Curling Championships, and the Pacific Salmon Foundation Oceanside Dinner and Auction. Staff in French Creek continue to contribute to the United Way, with EPCOR providing \$4.6 million to various chapters of the organization since 1993.

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.

Part of this year's work with the CAP included providing information on the process of adding new wells to the French Creek system, including a tour of the well sites. Members also gained a better understanding of the local watershed as a result of detailed presentations on the aquifer.

Safety and Environment

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 2013. 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 first aid, fall protection, Workplace Hazardous Materials Information System (WHMIS), and hazard recognition training for all operators.

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

Beyond eliminating the use of surface water in French Creek, other environmental accomplishments in 2013 included updating the Environmental Assurance Plan and ensuring no reportable environmental spills occur. Achieving no reportable spills for an eighth consecutive year is among EPCOR's environmental priorities for 2014.



What's Ahead

Quality Assurance

EPCOR replaces surface water supplies with additional groundwater supply from additional wells, a prudent and cost-effective strategy. We will continue to ensure water quality through ongoing monitoring of French Creek's groundwater supply, regular maintenance of laboratory equipment and water quality testing 24/7, year-round.

We will continue engaging customers and local government to raise awareness about cross-connection, which is a real or potential connection between the drinking water supply and any source of contaminant.

Operational Excellence

To increase operational knowledge and ensure a safe work environment, we will continue encouraging staff to pursue the highest level of provincial certification. Our Senior Operator is certified at the highest level (Level 4 Water Treatment), while our second Operator holds the next highest certification (Level 3 Water Treatment). Our Operations Manager has Level 2 certification in Water Treatment and Level 3 certification in Water Distribution.

Capital

Planned capital investments for the 2012-2014 period will improve system reliability and meet ongoing maintenance requirements. They include:

- water treatment plant and water main upgrades;
- distribution system leak detection;
- meter replacements to ensure efficiency;
- installation of an additional greensand filter at the Drew Road Water Treatment Plant to ensure sufficient treatment capabilities as new wells come online; and
- installation of standby generators at both reservoirs to maintain fire protection in the event of a power outage.

Safety

The safety of our customers and our staff remains a priority for 2014. Staff will update the Emergency Response Plan, while also striving to achieve eight years with no lost-time incidents.

Customer Care & Community

Our employees will continue to monitor, track and follow up on all customer inquiries. Regular communication and engagement activities will remain ongoing, including work with the Community Advisory Panel.

We will also continue to invest in the community through several programs, including our Helping Hands initiative that supports organizations for which our staff volunteer.

The French Creek Water System

Water Treatment

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

In 2013, French Creek obtained its drinking water from a total of 15 active wells in four well fields. The aquifers provide good-quality drinking water. The water is chlorinated before it enters EPCOR's seven storage reservoirs.

One well field contains higher amounts of iron and manganese that can impact the taste of water or potentially stain plumbing and laundry if left untreated. To manage these aesthetic concerns, EPCOR constructed a greensand filtration plant at Drew Road in 2008. The treatment plant removes up to 95 per cent of the total iron and manganese from the source water. As a result, water quality exceeds the aesthetic objectives set out by Health Canada.

These objectives, known as the Guidelines for Canadian Drinking Water Quality, require iron levels which do not exceed 0.3 milligram per litre. French Creek's average iron levels in 2013 were far below, with less than 0.01 milligram of iron per litre. A milligram is equal to one thousandth of a gram. When it comes to manganese in drinking water, the standard is 0.05 milligram per litre. This past year, the average concentration of manganese in French Creek's water was significantly lower at less than 0.005 milligram per litre.

Water Distribution

The system consists of: seven water storage reservoirs, 15 active wells, a booster station pump house, 30 kilometres of piping, 19 air and/or vacuum release valves and 367 mainline valves. A total of 160 fire hydrants enhance fire protection service for the area.

Water service in the area is metered, which means customers are only charged for their actual water consumption over the minimum base rate.



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