



# **2019 FRENCH CREEK PERFORMANCE REPORT**



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**EPCOR has been providing water services to the French Creek community for 14 years.**

## ABOUT US

EPCOR has been providing quality drinking water and essential wastewater services for more than 100 years. We serve more than two million people in over 85 communities and industrial sites across western Canada and the southwest United States.

EPCOR has been providing water services to the French Creek community for 14 years. We work to ensure the performance of the utility meets the consistently high standards that French Creek residents expect.

Through the province's Water Protection Act, EPCOR is registered and approved to remove groundwater to produce safe drinking water for citizens. In addition, EPCOR adheres to the provincial government's Water Sustainability Act, which is designed to protect B.C.'s water supply and regulates groundwater use.

We work closely with our regulators: the B.C. Comptroller of Water Rights and the Vancouver Island Health Authority (VIHA). The capital program and operations budgets are approved by the B.C. Comptroller's Office and detailed reporting is submitted to both regulators.

In 2016, the Regional District of Nanaimo (RDN) first approached EPCOR about the potential purchase of the French Creek utility. In 2019, after review and further discussion with the RDN, we declined the RDN's offer. This update was communicated to the community in August 2019. We want to continue to own, operate and maintain the water operations in French Creek and as the community grows, we want to grow with it.

We are accountable to deliver service that meets key measures for Quality Assurance, Safety, Environment, Customer Care, Capital Programs and Operational Excellence.

This report is part of our commitment to accountability and transparency.



# QUALITY ASSURANCE

At EPCOR, our employees are proud to deliver safe, clean drinking water to the French Creek community. We go above and beyond the minimum standards to produce high quality water that's clean and safe to drink.

## Ensuring Water Quality

In 2019, French Creek obtained its drinking water from 16 active wells in three well fields. While naturally-occurring minerals from this source can result in variations in odour and taste, the water is safe to drink.

EPCOR is proud to operate, maintain and own the infrastructure in French Creek that helps us treat and deliver water to your home. This includes the wells, pipes, hydrants, pump house and water treatment plants that make up our network.

The water source in French Creek—groundwater—is owned by the Crown on behalf of residents of British Columbia. Through the province's Water Protection Act, EPCOR is registered and approved to remove groundwater to produce safe drinking water for citizens.

In addition, EPCOR adheres to the provincial government's Water Sustainability Act, which is designed to protect B.C.'s water supply and regulates groundwater use.

This year, EPCOR carried out more than 5,000 water quality tests. All testing showed that French Creek's drinking water successfully met both Health Canada Guidelines for Canadian Drinking Water and B.C. water quality regulatory requirements.

## Lead in Drinking Water

In March 2019, Health Canada reduced its maximum acceptable concentration (MAC) for lead in drinking water from 10 µg/L (micrograms per Litre) to 5 µg/L.

Water in French Creek continues to be safe to drink. There are no measurable levels of lead in drinking water when it leaves the water treatment facility in French Creek and there is no lead piping in the publicly owned distribution system.

In addition to reducing the MAC of lead, the new guideline shifted the point of compliance to the tap of a residence or building. Lead may be found in tap water in homes that have lead pipes on the residence's side or have household plumbing components or fixtures that contain lead.

To ensure we meet the new Guideline, EPCOR has a plan in place to determine lead levels at the tap of representative older buildings and will be undertaking this testing when pandemic-related social distancing measures have been lifted.

## Manganese in Drinking Water

In 2019, Health Canada set a MAC of 0.12 mg/L (120µg/L) for manganese in drinking water.

Health Canada also established a new Aesthetic Objective for manganese of 0.02 mg/L. Manganese in water at this concentration may still affect the colour or appearance of the water.

EPCOR treats the water we supply for manganese and the levels of this element in French Creek's water meet Health Canada Guidelines for Canadian Drinking Water.

EPCOR's Drew Road Water Treatment Plant uses a greensand filtration system that removes manganese to below detectable levels, as shown in the tables of this report.

## Safe and Clean Drinking Water

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.

Tests at various levels and for different parameters are conducted daily, weekly and monthly. Not only do our local operators test and calibrate the equipment used in reporting water quality results daily but certified technicians also calibrate and check all water lab equipment annually.

The following tables provide detailed information on the sampling and testing completed in 2019.





### Physical and Chemical Water Quality Data for French Creek Source and Distribution Water for 2019

Parameter	Units of Measure	Annual Minimum Recorded	Annual Maximum Recorded	Annual Average Recorded	Annual Average Recorded
<b>BACTERIA</b>					
E. Coli	CFU/100 ml	<1	<1	<1 GM	0
Total Coliform	CFU/100 ml	1	<1	<1 GM	0
<b>DISINFECTION BY-PRODUCTS</b>					
Trihalomethanes	mg/L	78.3	80.4	79.4	0.1
Haloacetic Acid	mg/L	47.4	51.9	49.7	0.08
<b>OTHER</b>					
Free Chlorine	mg/L	0.26	1.45	0.99	>0.20
pH		7.0	8.2	7.7	6.5-8.5 (AO)
Temperature	°C	5	19	11	15 (AO)
Turbidity	NTU	0.05	0.79	0.13	1

<sup>1</sup> The Guideline is 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.

### Summary of Total Coliform and E. Coli (2019)

Sampling Location	No. of Samples	Total Coliform max	E. Coli max
Admiral Tryon	24	0	0
Kasba Circle	24	1	0
Black Brant	24	0	0
Hawthorne Rise	24	0	0
Miller Road	24	0	0
French Creek House	24	0	0
Sunrise Drive	24	0	0
Mid Island Co-op	24	0	0

### Abbreviations

<	Less than detection limit
>	More than detection limit
AO	Aesthetic Objective
CFU	Colony-forming unit
GM	Gross Mean
mg/L	Milligram per Litre
NA	Not Applicable
NTU	Nephelometric Turbidity Unit

Substance	Units of Measure	Annual Minimum Recorded	Annual Maximum Recorded	Annual Average Recorded	Guidelines
<b>TRACE METALS</b>					
Aluminum	mg/L	<0.0050	<0.0050	<0.0050	0.1/0.2 (AO)
Antimony	mg/L	<0.00020	<0.00020	<0.00020	0.006
Arsenic	mg/L	<0.00050	0.00069	0.00054	0.01
Barium	mg/L	0.0080	0.0189	0.0147	1
Boron	mg/L	0.019	0.176	0.066	5
Calcium	mg/L	31.9	51.8	44.3	NA
Chromium	mg/L	<0.00050	0.00166	0.00126	0.05
Cobalt	mg/L	<0.00010	<0.00010	<0.00010	NA
Copper	mg/L	0.0033	0.0809	0.0307	≤1.0 (AO)
Iron	mg/L	<0.010	0.018	0.012	0.3 (AO)
Lead	mg/L	<0.00020	0.00166	0.00061	0.01
Magnesium	mg/L	15.0	24.5	20.7	NA
Manganese	mg/L	0.0003	0.0102	0.0033	0.05 (AO)
Nickel	mg/L	<0.00040	0.00054	0.00044	NA
Potassium	mg/L	1.00	2.72	1.47	NA
Selenium	mg/L	<0.00050	<0.00050	<0.00050	0.01
Silicon	mg/L	13.1	16.3	14.9	NA
Sodium	mg/L	123	28.9	17.3	200
Thallium	mg/L	<0.000020	<0.000020	<0.000020	NA
Tin	mg/L	<0.00020	0.0005	0.0003	NA
Titanium	mg/L	<0.0050	<0.0050	<0.0050	NA
Uranium	mg/L	0.000027	0.000466	0.000293	NA
Vanadium	mg/L	<0.0010	0.0048	0.0030	0.0036
Zinc	mg/L	0.0058	0.0214	0.0113	≤5.0 (AO)
Zirconium	mg/L	<0.00010	<0.00010	<0.00010	NA

### 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 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 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.



# SAFETY AND ENVIRONMENT

The health of our water supply affects us today and tomorrow. That's why EPCOR goes above and beyond to protect the environment while ensuring future generations have access to clean and safe water. Making sure our employees and contractors get home safely after work is a top priority for EPCOR.

These positive results stem from our continual emphasis on safety training for our employees and contractors. This past year, employees received training on various topics, such as Working Minds, EPCOR Athletes, Fall Protection, First Aid, Emergency Response and Environmental Management.

EPCOR French Creek also met all its internal Safety Key Performance Measures for leadership, hazard management, monitoring and training.

The French Creek 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.

## Developing Water Professionals

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

To ensure ongoing operational excellence, EPCOR works with our operators to maintain or expand upon their current level of certification.

EPCOR has a team of professionals treating water in the community including our Senior Operator certified at the highest level (Level IV Water Treatment and Water Distribution) and a second Operator who holds the next highest certification (Level III Water Treatment and Water Distribution). A third Operator, who holds a Level II Water Distribution and a Level I Water Treatment, was hired to replace our second Operator who retired in the fall of 2019 after 10 notable years of service.

## Protecting the Environment

EPCOR goes above and beyond to protect the environment while ensuring future generations have access to clean and safe water.



We are proud to report that for the 14<sup>th</sup> consecutive year, EPCOR French Creek has not had a reportable environmental incident.



# CUSTOMER CARE

Our customers push us to achieve the highest customer standards possible. We understand the importance our customers place on reliable water service. It's why we work hard to provide our customers with great service.

## Responding to Outages

Our crews work quickly and safely to restore service when an outage occurs. In 2019, EPCOR responded to and resolved seven outages in the French Creek system and restored all outages within 24 hours.

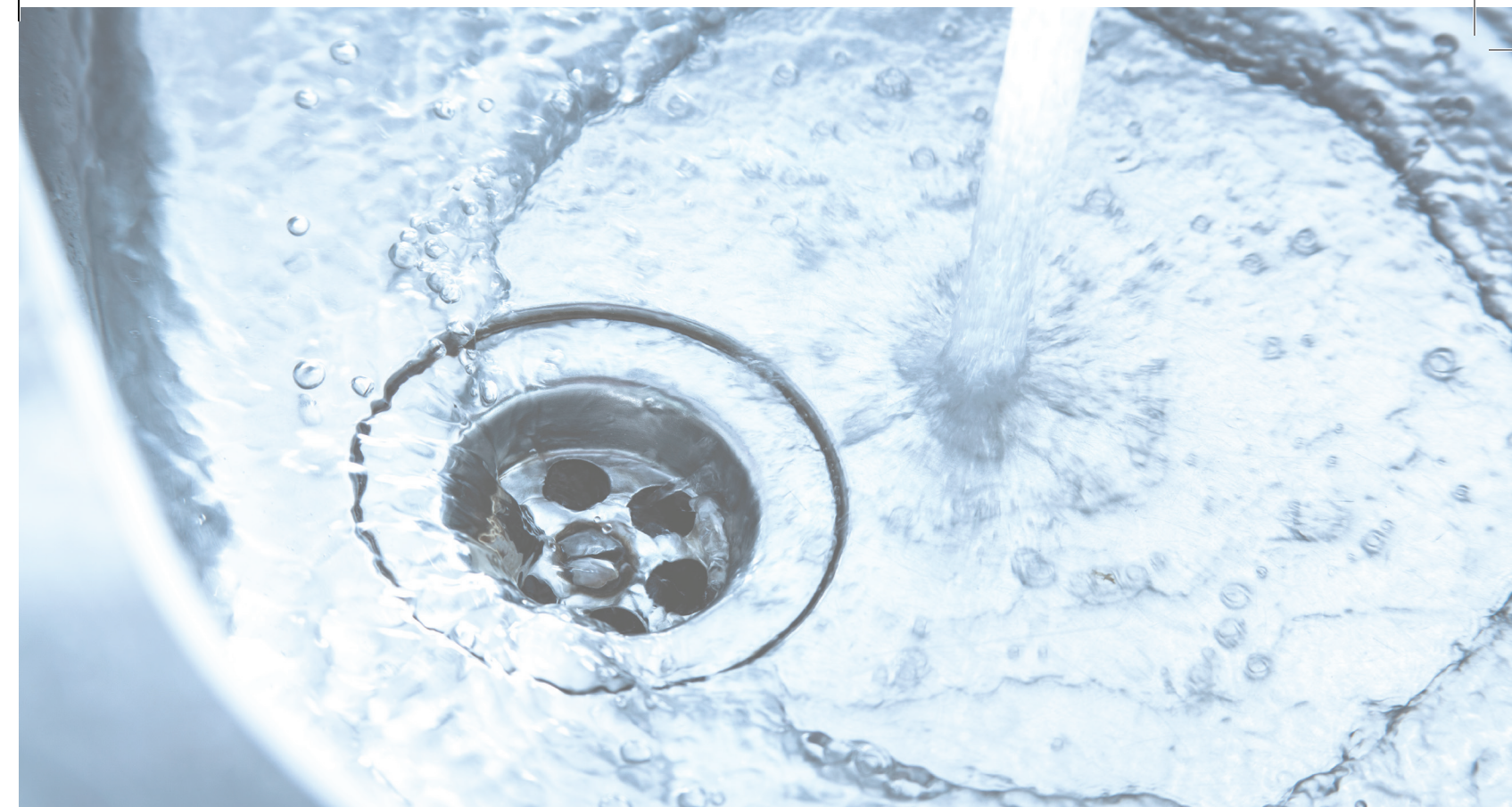
## Community Engagement

Through EPCOR's Charitable Partnership Program and Helping Hands grant, we support organizations that enhance the community's quality of life.

In 2019, EPCOR supported the following associations and initiatives:

- Parksville Beach Festival Society - Sand Sculpting Competition & Exhibition
- Qualicum Beach Fire & Ice Festival
- Pacific Salmon Foundation
- United Way
- Local Food Bank

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



## 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 firsthand from these volunteers who commit to a three-year term and meet three to four times annually.

In 2019, EPCOR thanked CAP members who had completed their term and welcomed new members to the panel. The new term runs from December 2019 to 2021.

Last year, the CAP met three times to discuss the following topics, which were presented and led by EPCOR:

- Presentation: French Creek Looking Ahead. An update on completed projects, planned work and future projects.
- An overview of water quality in French Creek.
- An understanding of the RDN's recent interest in EPCOR's assets in French Creek, sharing publicly available information.
- Update on EPCOR's operational master plan and requested feedback from CAP pertaining to prioritization of projects.
- Presentation: EPCOR's boil water advisory process.
- Presentation on EPCOR's community involvement and discussion on local opportunities
- Focus session with new members: understanding of group's interests, awareness and concerns regarding water treatment and service deliver in French Creek.



# OPERATIONAL EXCELLENCE

Maintenance and capital programs are critical to delivering operational excellence for the water system in the French Creek community.

Since EPCOR began operating the French Creek Utility in May 2006, we have made significant improvements. These include the construction of the Drew Road Water Treatment Plant, installation of new hydrants, replacement and upgrades of water meters and increased water quality monitoring.

In 2019, we worked with the RDN and local developers to provide water service to new residential and retail developments that reflect the growth of the community. We also began working to update our overall master plan to ensure we continue to provide clean, safe water to our existing and new customers in the most cost effective way possible.

## Capital Programs

We proactively manage the infrastructure through regular maintenance, evaluations and improvement programs.

Capital programs vary from those included in the maintenance program to ideas identified by EPCOR subject matter experts to help ensure the utility is at the forefront of industry best practices.

In 2019, we completed the following improvements:

- replaced 100 water meters
- installed three new fire hydrants
- purchased a portable generator to power our largest wells during a power outage
- decommissioned three wells that were no longer in use, as per B.C groundwater regulations
- rehabilitated two wells to bring production back to original levels

**We are proud to report that our team in French Creek hasn't had a single lost time incident in the past 13 years.**

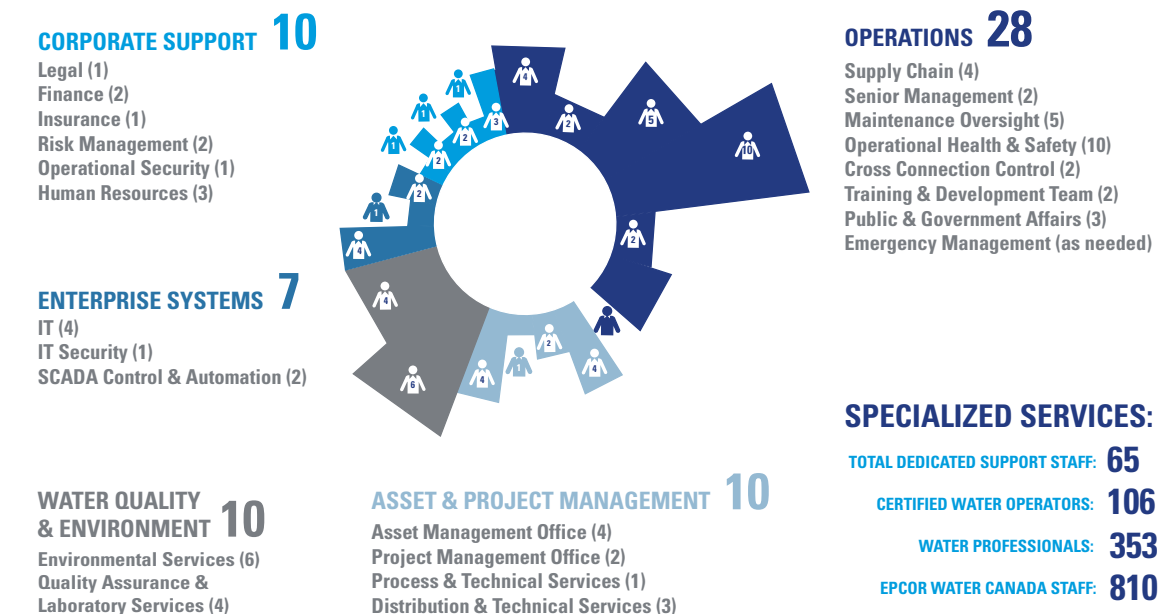
# EPCOR ADVANTAGE

## EPCOR Advantage

As partners in the delivery of essential services to the community, we utilize the critical resources required to ensure that customers in French Creek are satisfied with their water service. The depth of our expertise stretches beyond basic services.

EPCOR supports the community and our partners with value-added programs including stakeholder engagement, community investment, integrated health and safety and supply chain management, among others.

A complete look at our specialized resources in Western Canada is shown in the image below.







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