Fermentation Sector

Updated Sewer Use Bylaw Requirements

Capital Regional District | August 2022

The fermentation sector is a growing industry and an economic driver in the capital region. As the industry grows, it is important that the waste generated is sustainably and responsibly managed.

Wastewater from fermentation operations alters the pH in the sewer system and contains suspended solids and organics that, in high concentrations can impact our infrastructure, aquatic life and the environment. To reduce these (and other) impacts, facilities discharging non-domestic wastewater to the sewer system must follow the CRD Sewer Use Bylaw No. 2922.

Fermentation operators include brew pubs, micro-breweries, cottage breweries, wineries, brew-on-premises operations, vint-on-premises operations and distilleries.

The CRD has introduced changes to the enforcement levels and regulatory requirements for fermentation operators under the Bylaw. The new requirements are based on the **annual volume of saleable product.** This guide outlines the new regulations and practices for fermentation operators to responsibly manage wastewater and are summarized in the table below. Questions on the changes? Contact the CRD at sourcecontrol@crd.bc.ca.

Summary of Changes to the Fermentation Sector Regulatory Requirements

Enforcement Level	Annual Volume of Saleable Product (hL)	Flow Monitoring	Sampling Requirements	Reporting to the CRD	Fees	Example Facility Type
Code of Practice	**< 250**	None	None	Log book on site	None	Wine and non-kettle u-brews; kombucha production
Minor Authorization	**250 – 1,000**	None	Twice a year*	Twice per year	None	Small breweries and brew pubs, kettle u-brews
Major Authorization	**1,001 – 7,500**	Record monthly	Once per quarter*	Once per quarter	None	Medium breweries and brew pubs
Permit	**> 7,501**	Record monthly	Monthly*	Once per quarter	Fees	Large breweries and distilleries

** If analytical data results are outside of permitted levels more sampling will be required.*

Requirement 1 - Provide a Sampling Point

All fermentation operations must provide a sampling point with the following criteria:

- Downstream from all fermentation equipment and any wastewater treatment fixture
- Upstream of washrooms
- Easily accessible

Contact the CRD to discuss options prior to installing a new sampling point.

Figure 1: Example of sampling point for fermentation operations **with** treatment equipment

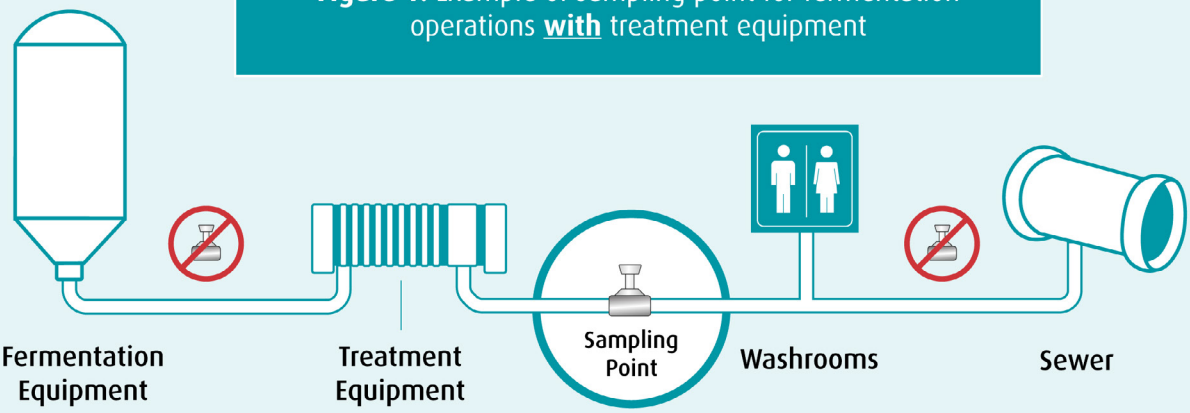


Figure 2: Examples of sampling points for fermentation operations **without** treatment equipment

Fermentation Vessel

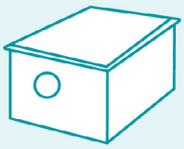
Draw sample from carboy or other small fermentation vessel.

Sink

If fermentation vessel washed in sink, plug sink to take sample.

Spigot or Check Valve

Install a spigot or check valve underneath a sink or downstream.



Trade Waste Interceptor

A trade waste interceptor may be possible if accessible and upstream of washrooms.

Figure courtesy of Metro Vancouver

Requirement 2 - Sample Wastewater

Wastewater from fermentation operations may contain high levels of parameters of concern such as biochemical oxygen demand (BOD), chemical oxygen demand (COD), total suspended solids (TSS) and pH. Regular sampling is required to minimize the effects of the wastewater on infrastructure, aquatic life and the environment. Limits for parameters of concern are based on wastewater flow volumes. The CRD can provide more information on the acceptable ranges, any potential exceptions and give guidance on sample collection and selection of an accredited laboratory.

Sampling Requirements:

- Composite sample collected over the course of one day or one brewing cycle.
  - » Minimum one sub-sample per hour or eight sub-samples over batch, whichever is more.
- Sent to an accredited lab for analysis.
- During cleaning and sterilization of fermentation equipment, operators must measure and record pH at least once per day during discharge to sewer using a properly calibrated pH meter.

Requirement 3 – Monitor Wastewater Flow

For major authorizations and permits, wastewater flows must be measured, recorded, and reported in the quarterly report. This may be accomplished several ways including:

- Installing a wastewater flow meter;
- Installing a flow meter on the drinking water line going into the fermentation production area and subtracting final product volume or;
- Another method approved by the CRD.

Requirement 4 – Complete Records and Reporting

Records and reporting help demonstrate that operators are in compliance with the Sewer Use Bylaw and must be kept for a period of two years. Regular reporting is required for most enforcement levels and includes:

- Sampling analytical results
- pH logs
- Monthly packaged production volumes
- Record of off-spec product disposal
- Flow monitoring (for major authorizations and permits)

Requirement 5 – Properly Dispose of the Off-Spec Product

Off-spec product or bad batches are very high in BOD which, if disposed of in the sanitary sewer will negatively impact the wastewater treatment infrastructure and environment. Off-spec product over 100 litres must be taken off-site for disposal as trucked liquid waste. Use a qualified trucked liquid waste service provider for proper disposal. Keep a log of the date, time, volume and product sent for off-site disposal.

Check Out More Ways to Protect the Environment

Stormwater Best Management Practices

Avoid stormwater contamination and protect our waterways by preventing fermentation waste from entering the storm drain network (which includes ditches, catch basins and roadways). Follow these best management practices: (Click here to learn more about stormwater)

Have a spill plan and kit available on site

- Never pour any fluids, wash/rinse water, wastewater or spills into storm drains, ditches, parking lots or outdoor work areas.
- Store waste products and outdoor containers under covered areas with appropriate spill containment. Inspect after a rainstorm to make sure no materials have leaked out.
- Educate staff about spill prevention and response and have a spill plan and kit available.
- Clean out parking lot catch basins once a year or more often if needed.
- If you operate in North Saanich, Central Saanich or Sidney, check out the CRD Saanich Peninsula Stormwater Bylaw No. 4168 requirements. If you operate in another municipality, refer to their stormwater bylaw.

Sustainable Business Practices

Reducing waste and making sustainable changes can benefit the environment and your business.

Maintain your drain - keep chemicals and waste away

- Choose environmentally-friendly cleaning products.
- Switch out your water-wasting once-through cooling (OTC) system for a new air-cooled system. Depending on the type of OTC system, the typical payback period is one to three years and rebates may be available.
- Buy local ingredients when possible.
- Reduce and reuse waste. Offer spent grains as animal feed and participate in a glass bottle pool.
- Choose electricity-powered heating, vehicles, EnergyStar appliances and LED lighting to reduce carbon pollution and your climate impact.
- Protect our drinking water. Fermentation operators must ensure proper connections and backflow protection are in place and maintained.

For more information and form templates visit
www.crd.bc.ca/brew

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