Fats, Oils, and Grease Management Program

Best Management Practices for Food Service Establishments

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Introduction

There are over 5,000 food service establishments (FSEs) across the city of Calgary, ranging from food packing facilities to restaurants. A comprehensive list of all FSEs is attached in Appendix A. All FSEs can generate fats, oils, and grease (FOG), which are found in their wastewater.

FOG poses a significant problem for both private plumbing systems and The City's wastewater infrastructure. When discharged into drains, FOG cools and solidifies, coating pipes and reducing pipe diameter over time. This restricts wastewater flow and can lead to blockages, resulting in wastewater backups, property damage, and increased maintenance costs. Every year, The City responds to thousands of wastewater back-ups and spends millions of dollars to repair damages caused by FOG-related blockages. For FSEs, FOG-related plumbing issues can lead to costly repairs, operational disruptions, and lost customers. In severe cases, blockages in municipal mains can cause raw sewage to back up into nearby facilities, creating serious health risks and deterring customers.

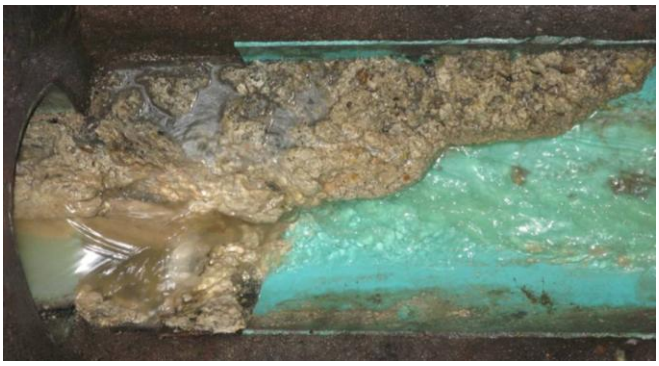


Figure 1 – Illustration of FOG coating a wastewater pipe, resulting in a restricted flow of the wastewater.

The purpose of this Best Management Practice (BMP) document is to provide guidance on managing FOG discharges from FSEs. By following the recommendations outlined, establishments can reduce the risk of wastewater backups while complying with The City of Calgary's Wastewater Bylaw 14M2012. This document outlines requirements for grease interceptors, employee training considerations, best operational practices, how to respond to accidental spills, and an overview of municipal regulations.

Grease Interceptors

What is a Grease Interceptor and How Does it Work?

A grease interceptor is a plumbing and environmental protection device installed in an FSE to control the amount of FOG discharged into the wastewater system. It separates FOG and solids from wastewater so it can be removed by a licensed service provider. Grease interceptors may be installed above or below ground, either inside or outside the facility. They may be plastic or metal and are typically installed by a certified plumbing company. A grease interceptor works by slowing the flow of wastewater, allowing it to cool and separate. As the water cools, grease rises to the surface while solids settle at the bottom.

Baffles, which are internal dividers that control flow, retain the separated grease and solids within the interceptor (*Figure 2*). The treated wastewater then exits into the municipal wastewater system, while the captured FOG remains in the interceptor until removal.

Figure 2 – Cross section of a properly functioning grease interceptor.

Requirements for Grease Interceptors

Requirements and Restrictions

Under section 27(1)(b) and 27(1)(c) of The City of Calgary Wastewater Bylaw 14M2012, grease interceptors must be designed and sized in accordance with ASME A112.14.3-2022 / CSA B481.1:22 and the National Plumbing Code of Canada. Additionally, all grease interceptors are required to be certified by CSA or an equivalent organization and should have a recognized certification stamp. Furthermore, under the National Plumbing Code of Canada and section 27(1)(a) of the Wastewater Bylaw, all fixtures that discharge FOG must be connected to a grease interceptor. Typical fixtures can include sinks, dishwashers, wok ranges, floor drains, soup kettles, and cup, pitcher, or glass rinsers, including portable rinsers.

Additionally, the use of emulsifiers, enzymes, bacteria, solvents, hot water, or other agents to pass FOG through an interceptor is prohibited under section 27(4) of the Wastewater Bylaw. These substances reduce the effectiveness of the interceptor and increase the risk of odours, health concerns, and blockages further downstream.

Sizing and Flow Rate

A certified plumber is the best resource for determining whether a grease interceptor is properly sized for a facility, as sizing depends on water volume, connected fixtures, and operational factors. However, there is a useful grease interceptor sizing calculation:

1. Determine all the fixtures that connect to each interceptor in your facility. For this example, we have two sinks connected to one interceptor. (Note: if a dishwasher is used at the facility, it may be required to be connected to its own dedicated grease interceptor).
2. Next, calculate the peak flow rates for each fixture by measuring the size. Sink One is 0.4 metres deep x 0.4 metres long x 0.4 meters wide. Sink Two is 0.3 metres deep x 0.3 metres long x 0.3 metres wide.
3. Convert cubic meters to litres by multiplying by 1,000.
4. Once you have the volume of both sinks, calculate 75% of those volumes by multiplying by 0.75.

Note: see *Table 1* below for steps 2-4.

Table 1 – Example calculation to determine which size of grease interceptor is needed.

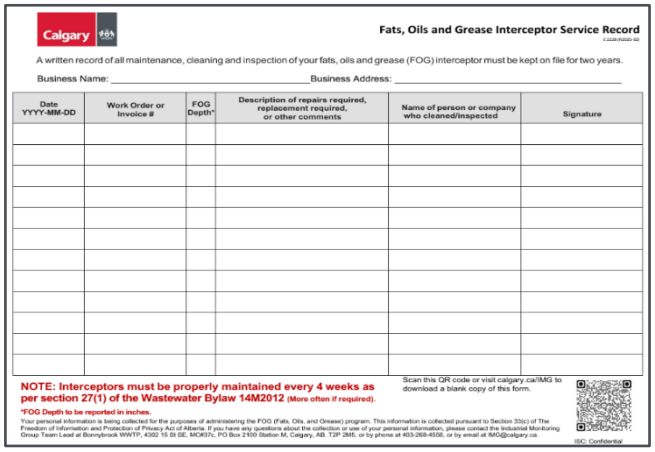
Example	Sink One	Sink Two
Calculating Sink Volume	**Step 2:** 0.4 m x 0.4 m x 0.4 m **Step 3:** = 0.064 cubic metres (m^3) x 1,000 = 64 litres (L) **Step 4:** 64 x 0.75 = 48 L	**Step 2:** 0.3 m x 0.3 m x 0.3 m **Step 3:** = 0.027 cubic metres (m^3) x 1,000 = 27 litres (L) **Step 4:** 27 x 0.75 = 20.25 L
Combined Volume	48 L + 20.25 L = **68.25 L**	

5. Assuming it takes a sink one minute to completely drain from full, the combined peak flow rate for the two sinks is **68.25 litres/minute**. An interceptor rated above this flow rate should be adequate, provided best management practices are followed, and the unit is cleaned monthly. Please note that most grease interceptors are rated in gallons per minute, so unit conversion may be required.

If minimum sizing requirements are met but FOG issues persist, additional compliance measures may include improving management practices, increasing cleaning frequency, or upgrading the existing interceptor system.

Monitoring and Maintenance

When FOG bypasses a grease interceptor, it can cause wastewater backups, environmental pollution, and odours, which can negatively affect a business's revenue and reputation. To prevent these issues, it is crucial to maintain a consistent cleaning schedule of your grease interceptor. Under section 27(1)(g) of the Wastewater Bylaw, all FSEs are required to clean their interceptors at least once every four weeks, or as required by the Director, Water Services. Owners are also required under section 26(4)(b) and 26(4)(b.1) to maintain a service record sheet (*Figure 3*) for each grease interceptor for a minimum of two consecutive years. A blank service record sheet is attached in Appendix B.



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Fats, Oils and Grease Interceptor Service Record

A written record of all maintenance, cleaning and inspection of your fats, oils and grease (FOG) interceptor must be kept on file for two years.

Business Name: _____ Business Address: _____

Date YYYY-MM-DD	Work Order or Invoice #	FOG Depth*	Description of repairs required, replacement required, or other comments	Name of person or company who cleaned/inspected	Signature

NOTE: Interceptors must be properly maintained every 4 weeks as per section 27(1) of the Wastewater Bylaw 14M2012 (More often if required).

*FOG Depth to be reported in inches.

Scan this QR code or visit calgary.ca/IMG to download a blank copy of this form.

Your personal information is being collected for the purposes of administering the FOG (Fats, Oils, and Grease) program. This information is collected pursuant to Section 33(c) of The Freedom of Information and Protection of Privacy Act of Alberta. If you have any questions about the collection or use of your personal information, please contact the Industrial Monitoring Group Team Lead at Bonnybrook WWTP, 4302 16 St SE, MC#37c, PO Box 2100 Station M, Calgary, AB. T2P 2M5, or by phone at 403-268-4556, or by email at IMG@calgary.ca.

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Figure 3 – Required service record sheet to document monthly grease interceptor cleanings.

When hiring a service provider to clean a grease interceptor, the FSE must select a responsible, licensed company. The FSE remains responsible for the provider's actions during the service and the disposal of the collected waste afterwards. Therefore, choosing a reputable company helps prevent illegal practices, such as improper cleaning or unlawful dumping, which can damage plumbing systems and expose the business to liability. The FSE should supervise the service and ensure that the interceptor is fully cleaned, and the waste is disposed of at the approved facility, which is the Bonnybrook FOG Receiving Station.

Best Management Practices

This section describes the best management practices (BMPs) that can be followed to reduce the amount of FOG entering the wastewater system. Following these BMPs can help meet regulatory requirements, lower wastewater discharge costs, and protect your business, community, and environment.

Employee Education

One of the most effective ways to reduce FOG at an FSE is by educating staff on how to keep it out of the drains. Below is a list of simple actions that should be taken to accomplish this:

1. Wipe cooking equipment and scrape dishes to remove any FOG prior to washing.

Figure 4 – Ideal method to wipe cooking equipment.

2. Cool larger amounts of grease until they solidify, then scrape these materials into the green bin.

Figure 5 – Ideal method to scrape solidified grease.

3. Ask a manager which sinks can be used for FOG disposal. Do not dispose of any FOG through drains that are not connected to a grease interceptor.

4. Spend time to educate yourself on FOG and the impact it has on businesses, infrastructure, and the environment.

Establishment Operations

Simple changes to food preparation, cleaning practices, and establishment operations can significantly reduce the amount of FOG entering a FSE's wastewater system. Implementing the following BMPs can help protect plumbing infrastructure, improve grease interceptor performance, and reduce impacts on The City's wastewater system:

1. Post "No FOG" signs above sinks and drains that are not connected to a grease interceptor (attached in Appendix C). These signs serve as a clear reminder to staff about where FOG disposal is not permitted. Please note that handwashing sinks are not required to be connected to a grease interceptor but must only be used for handwashing purposes. A certified plumber can assist in identifying which fixtures are connected to a grease interceptor.

Figure 6 – Recommended signage to post above fixtures not connected to an interceptor.

2. Maintain wastewater temperatures below 60ºC, as grease interceptors become less effective when hot water enters the system. Higher temperatures delay grease separation and may allow FOG to pass through the interceptor before it can properly settle.

3. Recycle used fryer oil by storing it in approved containers for pickup by third-party recycling services. When transporting used cooking oil from the FSE to the collection bin, ensure it is in a sealed or stable container to prevent spills. Spilled cooking oil poses significant risks to the stormwater system and surrounding infrastructure.

Figure 7 – Example of fryer oil.

4. Where possible, use a strainer in kitchen sinks to catch any food waste. Empty the strainer into the compost once full.

5. Ensure grease interceptors are cleaned at least once every four weeks. Regular maintenance reduces odour, toxic gas buildup, blockages, and deterioration to the interceptor caused by prolonged FOG accumulation.

Additional Information

Replacing or Repairing a Grease Interceptor

Depending on the materials, grease interceptors will eventually require repairs or replacement to remain compliant with the Wastewater Bylaw. With proper maintenance, metal interceptors typically last two to seven years, while plastic units may last 10 years or more. Following the BMPs in this document can help extend interceptor life and reduce costs. Repairs or replacement is required when an interceptor can no longer effectively remove FOG, most commonly due to corrosion that causes cracks, leaks, or baffle failure. Depending on the model, this may involve component replacement or full unit replacement. For repair or replacement options, contact the interceptor vendor or a certified plumber.

Figure 8 – Example of a grease interceptor that has not been properly maintained. The visible corrosion suggests the interceptor no longer functions properly.

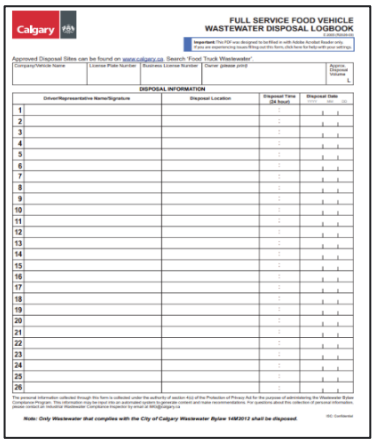
Full-Service Food Vehicles

Food truck operators in Calgary are required to dispose of wastewater only at approved disposal locations. A list of approved locations is available on The City of Calgary website (calgay.ca) by searching "*Food Truck Wastewater Disposal*."

Following each wastewater disposal, the operator must complete a logbook entry that includes the following information:

- Name of the full-service food vehicle
- License plate number
- Business license number
- Name of the vehicle owner
- Approximate disposal volume
- For each wastewater disposal event:
  - Name of the individual who conducted the disposal
  - Disposal location
  - Time of disposal
  - Date of disposal

The operator must maintain this logbook (*Figure 9*) and produce it upon request by an inspector or officer. Blank logbooks are attached in Appendix D.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FULL SERVICE FOOD VEHICLE
WASTEWATER DISPOSAL LOGBOOK

DISPOSAL INFORMATION

	Driver/Representative Name/Signature	Disposal Location	Disposal Time (24 hour)	Disposal Date
1			:	/ /
2			:	/ /
3			:	/ /
4			:	/ /
5			:	/ /
6			:	/ /
7			:	/ /
8			:	/ /
9			:	/ /
10			:	/ /
11			:	/ /
12			:	/ /
13			:	/ /
14			:	/ /
15			:	/ /
16			:	/ /
17			:	/ /
18			:	/ /
19			:	/ /
20			:	/ /
21			:	/ /
22			:	/ /
23			:	/ /
24			:	/ /
25			:	/ /
26			:	/ /

Figure 9 – Required logbook to document wastewater disposal events.

Accidental Spills or Releases

Accidental spills of FOG may occur from grease interceptors, used cooking oil bins, or during hauling activities. Spill response procedures must be in place and readily available to staff. A business should ensure a properly maintained spill kit (like corn starch, flour, or salt) is always available on site. All spill response activities must be conducted safely and in accordance with established safety procedures, including the use of appropriate personal protective equipment.

If a spill or unintentional release enters or may enter the wastewater or stormwater system, the business must immediately report the release in accordance with Wastewater Bylaw 14M2012. Notification is required to:

- The City of Calgary (dial 3-1-1), provide contact information, time, location, volume, type of material released, known hazards, and corrective actions taken.
- Emergency services (dial 9-1-1).
- The owner of the premise where the release occurred.
- Any other person that may be affected by the release.
- For releases that could harm the environment, the spill must also be reported to Alberta Environment & Protected Areas (1-800-222-6514).

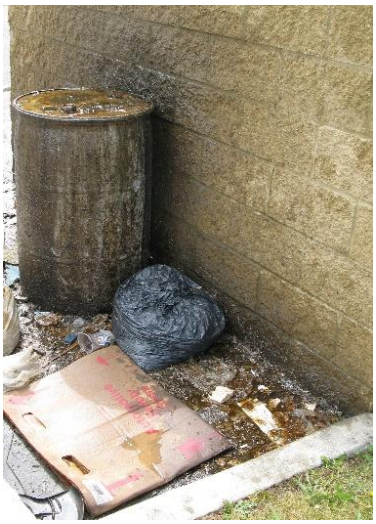

Figure 10 – Example of a poorly maintained used cooking oil barrel overflowing at the top, resulting in a FOG release.

Offences and Penalties

Table 2 summarizes key offences and associated penalties related to FOG generated by FSEs. This list is not exhaustive and is provided for information purposes only. The information is drawn from the food service establishment-specific provisions of The City of Calgary Wastewater Bylaw (Sections 26 & 27); reference to the full legislation is recommended. Penalties listed are limited to those under Wastewater Bylaw 14M2012, and additional penalties may apply under other municipal, provincial, and federal regulations.

Table 2 – List of offences and associated minimum and specified penalties for FSEs under Section 26 & 27 of The City of Calgary Wastewater Bylaw 14M2012. This list is non-exhaustive.

Section	Description of Offence	Minimum Penalty	Specified Penalty
26(4)(b)	Failure to keep a maintenance log in accordance with this Bylaw	$100	$500
26(4)(b.1)	Failure to keep maintenance logs for a minimum of 2 years	$100	$500
27(1)(a)	Failing to install a FOG interceptor at a location with adequate access	$500	$2000
27(1)(b)	Failing to select and install a properly designed FOG interceptor	$500	$2000
27(1)(c)	FOG interceptor fails to meet requirements of National Plumbing Code of Canada	$500	$2000
27(1)(d)	FOG interceptor installed in improper location	$500	$2000
27(1)(e)	FOG interceptor installed without appropriate clearance	$500	$2000
27(1)(f)	Failing to monitor, operate, and properly maintain a FOG interceptor	$500	$1500
27(1)(g)	Failing to clean FOG interceptor monthly or at intervals required by Director, Water Services	$500	$1500
27(1)(h)	Failing to dispose of exhaust hood wash water in accordance with this Bylaw	$500	$1500

Useful Sources

Managing Wastewater for Businesses

Wastewater Management - Food Service Establishments

Food Truck and RV Wastewater Disposal

Outdoor Storage of Used Cooking Oil

Protect Your Pipes

Wastewater Bylaw 14M2012

Stormwater Bylaw 37M2005

Wastewater Surcharge Program

Alberta Environment and Protected Areas - Wastewater and Stormwater Management

National Plumbing Code of Canada 2020

Testing and Certification - Grease Interceptors CSA

311 Calgary - Online Requests

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Appendix A: Types of Food Service Establishments

Category	Examples
Institutional Kitchen	Community halls; associations; clubs; worship centres (church, monastery, mosque, synagogue, temple); hospitals; long-term care homes; hospices; senior centres; childcare centres/daycares; schools; colleges; universities; detention centres; event centres
Grocery / Concession	Grocery stores (including bakery/meat/seafood/deli); produce markets; farmers' markets; bakeries; pastry shops; coffee shops; specialty drink shops; convenience stores; movie theatres; stage theatres; bulk food stores; ice cream shops
Food or Meat Processing	Butchers; meat-cutting facilities; meat processors; food processors, manufacturers, or packaging; commercial bakeries
Commercial Kitchen	Restaurants (seating or no seating); caterers; lounges; bars; pubs; brewpubs; hotel kitchens; banquet halls; commissary kitchens; ghost kitchens; cafeterias

Appendix B: Service Record Sheet

Service Record - Fats, Oils, and Grease Interceptor

E 2228 (R2026-01)

A written record of all maintenance, cleaning, and inspection of your fats, oils, and grease (FOG) interceptor must be kept on file for two years.

Business Name: _____ Business Address: _____

Date YYYY-MM-DD	Work Order or Invoice #	FOG Depth*	Description of repairs required, replacement required, or other comments	Name of person or company who cleaned/inspected	Signture

NOTE: Interceptors must be properly maintained every 4 weeks as per section 27(1) of the Wastewater Bylaw 14M2012 (More often if required).

***FOG Depth to be reported in inches.**

Scan this QR code or visit calgary.ca/IMG to download a blank copy of this form.

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Appendix C: “No FOG” Decal

Calgary

Stop and think!
Not down the sink.

No FOG (fats, oils or grease) here.

Only use sinks equipped with a grease interceptor to wash items and prepare food.

calgary.ca/IMG

Appendix D: Food Truck Logbook

Calgary

FULL SERVICE FOOD VEHICLE WASTEWATER DISPOSAL LOGBOOK

E 2005 (R2026-03)

Important: This PDF was designed to be filled in with Adobe Acrobat Reader only.
If you are experiencing issues filling out this form, click here for help with your settings.

Approved Disposal Sites can be found on www.calgary.ca. Search 'Food Truck Wastewater'.

Company/Vehicle Name	License Plate Number	Business License Number	Owner *(please print)*	Approx. Disposal Volume L

DISPOSAL INFORMATION

	Driver/Representative Name/Signature	Disposal Location	Disposal Time (24 hour)	Disposal Date YYYY MM DD
1			:	
2			:	
3			:	
4			:	
5			:	
6			:	
7			:	
8			:	
9			:	
10			:	
11			:	
12			:	
13			:	
14			:	
15			:	
16			:	
17			:	
18			:	
19			:	
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22			:	
23			:	
24			:	
25			:	
26			:	

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Note: Only Wastewater that complies with the City of Calgary Wastewater Bylaw 14M2012 shall be disposed.

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