

PUT YOUR DRAIN ON A FAT-FREE DIET

A Toolkit for Banff Businesses

When Fat, Oil and Grease (FOG) go down the drain, they can cause a lot of problems for your business – clogged pipes, reduced plumbing flow, odours or even sewer backups. The results can cost you time, money and customers.

A properly maintained grease trap is an important step in helping to reduce the risks to your business. A few simple actions in your kitchen can also help drastically reduce the amount of FOG your business sends down the drain.

This toolkit is for Banff business owners and managers, kitchen staff and anyone who uses grease, oil or fat in their operations.

What's In The Kit

- Quick Tips and a Handy Poster
- Why a Grease Trap
- How to Size Your Grease Trap
- How to Clean Your Grease Trap, and When
- Blank Records Form

You'll find additional copies of this handy toolkit online at banff.ca/grease.

Contact

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Quick Tips to Help Keep Fat, Oil and Grease Out of the Drain



1. Scrape dishes before washing

Scraping dishes before washing dramatically cuts the amount of fat, oil and grease going down the drain.



2. Wipe FOG from cooking equipment before washing

Use a paper towel to wipe down cooking equipment before washing.



3. Recycle used fryer grease for free

Store used fryer grease (such as canola and olive oil) to be recycled. Various third-parties will pick up fryer grease for free and recycle it into biodiesel.



4. Regularly inspect and clean the grease trap

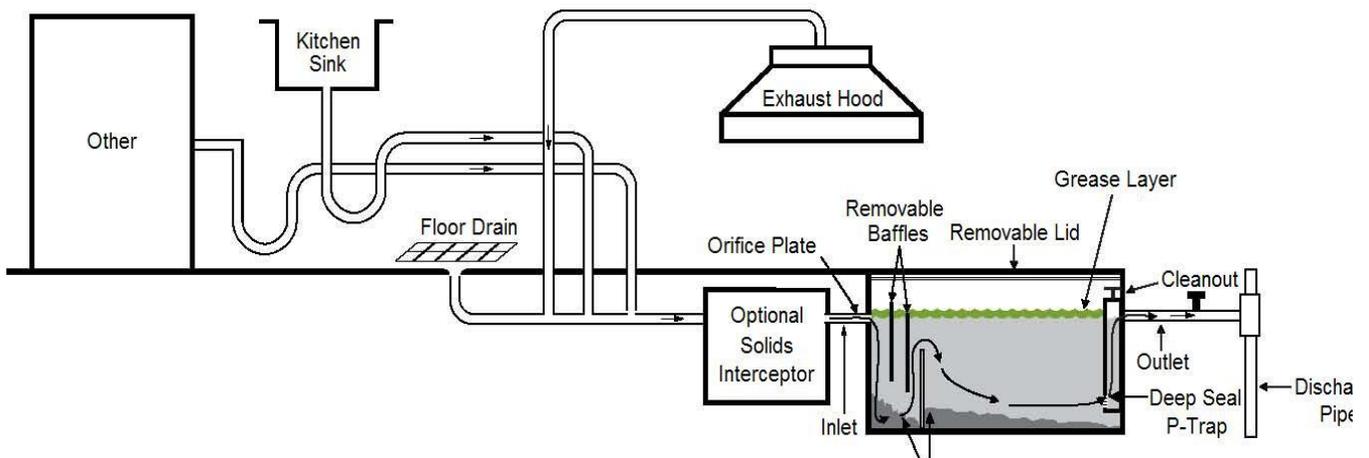
Regular maintenance of your grease trap is an important step. You can clean it yourself or hire a hauling company to do it for you. For more information on maintaining your grease trap, visit banff.ca/grease.

Being a good neighbour is good business

Grease Traps

The Town of Banff's Sewer Bylaw requires all restaurants, hotels, motels, garages, gasoline service stations and vehicle and equipment washing establishments (car washes) to provide and maintain properly sized traps or interceptors for grease, oil and sand, in addition to retaining maintenance documentation to ensure its effectiveness.

How they work



Grease traps separate grease and oil from wastewater. A grease trap slows down the flow of hot greasy water as it cools down the FOG solidifies and rises to the top of the trap. The cooler wastewater collects on the other side of the trap's baffle and from there exits into the Town's wastewater system, leaving FOG behind in the trap for removal.

Small indoor grease traps are usually located in the floor near the sink or rear exit. Larger outside grease traps are usually located a few feet from the building exterior areas.

What Size Should Your Grease Trap Be?

The right size of trap is needed to adequately capture FOG. If your grease trap is too small to manage the volume of water that runs through it, it can lead to clogged pipes, odours and raw sewage backups.

Grease traps come in a variety of sizes and are rated by the manufacturer for different flow rates. For example, a trap could be rated to manage flows between 75 and 375 litres per minute, when kitchen best management practices are used by staff (such as wiping cooking equipment and scraping dishes before washing).

A plumber can determine if your trap is properly sized for the volume of water that is running through it or calculate it yourself. The following is an example of how to do your own calculation:

1. Determine all of the fixtures that connect to each trap in your facility. For the purpose of this example, we have one dishwasher and two sinks.
2. Review the documentation provided by the dishwasher manufacturer to determine the peak flow rate for that appliance. Our sample dishwasher rated for 38 litres/minute.
3. Next, we will calculate the peak flow rates for your sinks by first measuring the size of the sinks. Sink "One" is 0.4 metres deep x 0.4 metres high x 0.4 metres wide and Sink "Two" is 0.3 deep x 0.3 high x 0.3 metres wide.
4. Calculate the complete volume of the sinks and then take 75 per cent of those volumes:

	Example Sink One	Example Sink Two
Calculating Sink Volume	(i) $0.4 \times 0.4 \times 0.4 = 0.064$ cubic metres (m3) (ii) $0.064 \text{ m}^3 \times 1,000 \text{ Litres/ m}^3 = 64$ Litres (iii) $64 \times 0.75 = 48$ Litres	(i) $0.3 \times 0.3 \times 0.3 = 0.027$ (m3) (ii) $0.027 \times 1,000 \text{ Litres/ m}^3 = 27$ Litres (iii) $27 \times 0.75 = 20.25$ Litres
Sink Volume	48 Litres	20.25 Litres
Combined Volume	$48 \text{ Litres} + 20.25 \text{ Litres} = 68.25 \text{ Litres}$	

5. With a drain downtime of one minute (meaning it takes the sink one minute to completely drain when full), the peak flow rate for the two sinks is 68.25 /min.
6. Add the dishwasher and the sinks' peak flow rates to get your total peak rate: 38 litres/minute + 68.25 litres/minute = 106.25 litres/minute.

Therefore, a trap rated at 75-375 litres/min should be adequate for this kitchen's needs if best management practices are consistently followed, and cleaning and maintenance are completed regularly.

Cleaning and Monitoring Your Grease Trap

Grease traps need monitoring and maintenance

Having a grease trap is only half the battle. Properly monitoring and maintaining the trap is just as important as owning one. If FOG bypasses your grease trap it can cause a lot of problems for your business: reduced plumbing flow, odours, a sewer backup and even temporary business closure. The results can cost your business time, money and customers. To prevent these plumbing problems, determine a cleaning schedule that's right for your kitchen.

How Often Should You Clean Your Grease Trap?

It can vary from several times a week to once every few weeks depending on its capacity, as well as the type of food and cooking methods employed by your establishment. You can reduce the frequency of cleanings by removing the top level of grease from your trap often, sometimes several times a week if necessary.

It's important that you continuously monitor your trap to ensure it's not reaching capacity. As it nears capacity, FOG will begin to bypass the trap, leading to blockages and backups.

Additives Only Delay FOG from Impacting Your Business

The Town strongly discourages the use of enzymes, chemicals and bacteria treatment to your trap, because it serves to delay the solidification of FOG – the clog often happens further along the pipes.

Keep A Service Record

A written record of all maintenance, cleaning and inspection of your Fat, Oil and grease (FOG) trap should be kept on file for two years. Use the form on the last page; more forms can be downloaded from banff.ca/grease by searching "FOG Record".

The Turkey Baster Method

1. Remove the lid of your grease trap.
2. Using a turkey baster, break through the fat layer at the top of the trap in attempts to determine its thickness.
3. If the fat layer is thick and solidified, the grease trap needs to be cleaned immediately.
4. If the fat layer breaks up easily, squeeze the baster bulb and insert the tip roughly 1 inch into liquid. Obtain a sample and see if its contents are unconsolidated FOG or water.
5. Continue by going 2 inches deep with the baster. If the result is unconsolidated FOG and water, continue by going 2½ inches deep. If by the third try you do not obtain a result of just water, your grease trap needs cleaning.

The Canadian Standards Association determines cleaning requirements by adding the FOG depth and the solids depth (debris at the bottom of the tank) together. This measurement should not exceed 25 per cent of the overall depth of your trap. The above rule provides a simple

How To Clean Your Grease Trap

You or your licensed hauler should follow these steps:

1. Open the grease trap and suction off the top layer of grease using a wet-dry vacuum, or manually pail it out, placing it in an appropriate storage container for later disposal.
2. Extract the solids at the bottom of the trap, placing it in an appropriate storage container for later disposal.
3. Extract any water, placing it in an appropriate storage container for later disposal.
4. Scrape and remove the baffles, if possible, and follow the five-side rule: thoroughly clean all four sides and the bottom of the trap using fresh water and a scraping tool. Rinse with clean water and suction out one last time. Place all substances in an appropriate storage container for later disposal.
5. Ensure that the inlet, outlet and air relief ports are clean and clear and that all internal components are working properly.
6. Properly reinstall all seals, replacing any that are brittle or cracked. Securely fasten the cover and fill the grease trap with clean water to ensure maximum efficiency.
7. Dispose of all substances by calling a licensed hauler, who will dispose of it at a licensed waste disposal facility.
8. Ensure that you and/or hauler are recording all maintenance, cleaning and inspection of your trap on the FOG Grease Interceptor Service Record (available on banff.ca by searching FOG Record). Make certain that if using a hauler, the hauler records the sludge depth and free water depth during maintenance. Food service establishments should keep service records onsite for a minimum of two years.

Please note: The Town strongly discourages the addition of enzymes, chemical and bacteria treatment to a trap. Enzymes, chemical and bacteria treatments only dissolve the grease enough for it to enter the wastewater system, where it re-congeals and hardens leading to clogged pipes and sewer backups.

The Canadian Standards Association states that “an operator of a food facility shall not use or permit the use of chemical agents, enzymes, bacteria, solvents, hot water or other agents to facilitate the passage of FOG through the grease interceptor.”

