

Fats, Oil and Grease (FOG) Best Management Practices Manual (BMP)



CITY OF
Yuma

Utilities Department
Pretreatment Division

This manual was written to provide restaurant and fast-food business managers and owners with information about animal and vegetable-based oil and grease pollution prevention techniques focused on their businesses, effective in both reducing maintenance costs for business owners, and preventing oil and grease discharges to the sewer system.

Many of the nation's fast-food restaurant chains participate in FOG recycling programs. Ensuring that grease trap and grease interceptors are properly installed and most importantly, properly maintained is more difficult. This manual focuses on proper maintenance of grease traps and interceptors and includes answers to many of the commonly asked questions related to grease pretreatment.

Knowledgeable municipal pretreatment staff, working with business owners, can effectively prevent oil and grease buildup, and associated problems, for both the sewerage agency and the restaurant owner.

If you have questions, please call the City of Yuma Pretreatment Division at (928) 373-4600.

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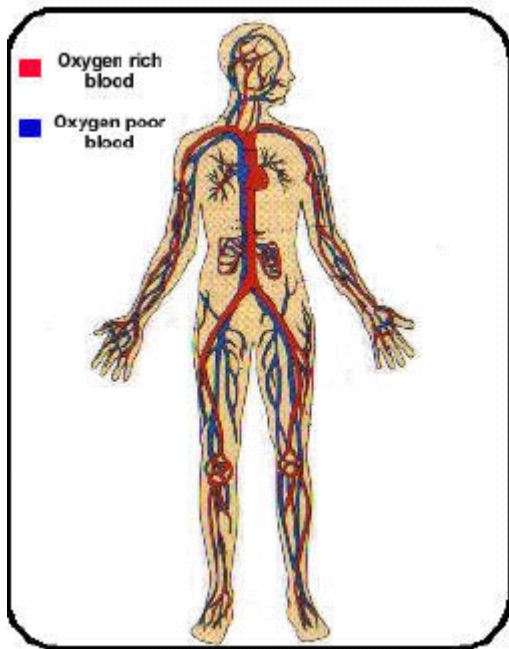
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What is FOG?

FOG is a shorthand way of saying Fats, Oils and Greases. FOG is composed of animal and vegetable fats and oils that are used to cook and prepare food. FOG should be recycled for use in other products or properly disposed of or land applied.

Why is FOG a Problem?

A wastewater system is similar to the human body. Wastewater flows through pipes (arteries), is pumped at pump stations (heart) and is cleaned by the wastewater plant (kidneys).



FOG clogs the pipes in the sewer system just like cholesterol clogs arteries. This makes the pumps work harder and can cause them to fail, just like having a heart attack.

FOG can cause backups in your sewer lines that can send sewage into your home or restaurant and that is an open invitation for disease and illnesses.

BMP #1: Train Your People



Train kitchen staff and other employees about how they can help ensure the Best Management Practices (BMPs) are implemented.

Reason:

People are more willing to support an effort when they understand the basis for it.

Benefits to Food Service Establishment:

All the subsequent benefits of Best Management Practices will have a better chance of being implemented.

BMP #2: Clearly Post No Grease Signs



Post these signs in restrooms, over sinks, near all floor drains, near all dishwashers and anywhere else where water may enter a drain to the sewer.

Reason:

Signs serve as a constant reminder for staff working in kitchens.

Benefits to Food Service Establishment:

These reminders will help minimize grease discharge to the traps and interceptors and reduce the cost of cleaning and disposal.

BMP #3: Use the Most Appropriate Water Temperature



Use water temperature of less than 140°F in all sinks, especially the pre-rinse sink before a mechanical dishwasher.

Reason:

Temperatures in excess of 140° F will dissolve grease, but it can solidify in the sanitary sewer collection system as the water cools.

Benefits to Food Service Establishment:

Water from mechanical dishwashers should not be discharged through a grease trap or interceptor.

The food service establishment will reduce its costs for the energy – gas or electric – for heating the water.

Note: Uniform Plumbing Code (UPC) prohibits discharging the dishwasher to grease traps.

BMP #4: Use the 3-Sink System



Use a three-sink dishwashing system, which includes sinks for washing, rinsing, and sanitizing in a 50-100 ppm bleach solution. Water temperatures are less than 140° F.

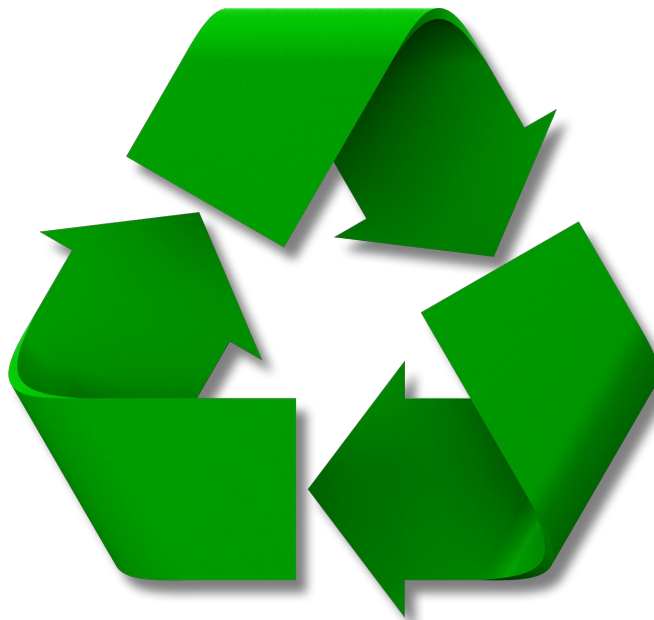
Reason:

The three-sink system uses water temperatures less than 140° F where a mechanical dishwasher requires a minimum temperature of 160° F.

Benefit to Food Service Establishment:

The food service establishment will reduce its costs for the energy - gas or electric - for heating the water for the mechanical dishwasher and for operating the dishwasher.

BMP #5: Recycle Waste Cooking Oil



There are many companies who specialize in taking waste cooking oil from fryers and other types of equipment and making animal feed or fuels, such as bio-diesel, from it.

Reason:

Recycling reduces the amount of wastes that have to be disposed as a solid waste, and helps to prolong the life of any grease traps and interceptors.

Benefit to Food Service Establishment:

It keeps the FOG out of the sewer system.

BMP #6: Dry Wipe, Scrape All Pots, Pans, and Plates



Practice dry cleanup. Remove food wastes with “dry” methods such as wiping or scraping before using “wet” methods that use water. Use paper towels, and rubber scrapers to remove fats, oils, and greases from cookware, utensils, and serving ware.

Reason:

The grease and food that remains in pots, pans, and dishware will likely go to the landfill. By "dry wiping" and disposing in garbage receptacles, the material will not be sent to the grease traps and interceptors.

Benefits to Food Service Establishment:

This will reduce the amount of material going to grease traps and interceptors, which will require less frequent cleaning, reducing maintenance costs.

BMP #7: Properly Dispose of Food Waste



Food should never be poured down a drain or into a toilet.

Recycling food wastes is the best option for a food service establishment.

Some recyclers will take food waste for animal feed. In the absence of such recyclers, the food waste can be disposed as solid waste in landfills by solid waste haulers.

Benefits to Food Service Establishment:

Recycling food wastes will reduce the cost of solid waste disposal.

Solid waste disposal of food waste will reduce the frequency and cost of grease trap and interceptor cleaning.

BMP #8: Witness Grease Interceptor Cleaning



Witness all grease trap or interceptor cleaning and maintenance activities to ensure the device is properly operating.

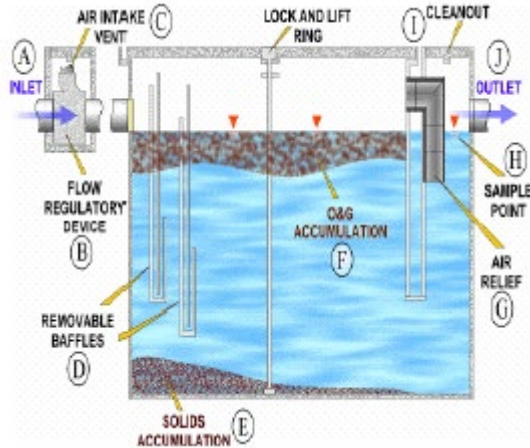
Reason:

Grease trap and grease interceptor pumpers may take shortcuts. If the establishment manager inspects the cleaning operation and ensures it is consistent with the procedures in the section on Grease Trap and Interceptor Maintenance, they are more assured of getting full value for their money.

Benefit to Food Service Establishment:

The establishment will ensure it is getting value for the cost of cleaning the grease trap or interceptor. Otherwise, the establishment may be paying for cleaning more often than necessary.

BMP #9: Clean Under Sink Grease Traps at Least Weekly



Under sink traps have less volume than grease interceptors.

If grease traps are more than 1/3 full when cleaned weekly, the cleaning frequency needs to be increased.

Reason:

Undersink grease traps have less volume than grease interceptors.

Place recovered grease in proper disposal container. It can go in a dumpster if it is in a closed container. **Do not** pour down any drains or in any toilets.

Benefit to Food Service Establishment:

This will extend the length of the cleaning cycle for grease interceptors that the establishment maintains.

BMP #10: Clean Grease Interceptors Routinely



Grease interceptors must be cleaned routinely to ensure that grease accumulation does not interfere with proper operation.

The cleaning frequency is a function of the type of establishment, the size of the interceptor, and the volume of flow discharged to the interceptor.

Benefit to Food Service Establishment:

Routine cleaning will prevent plugging of the sewer line between the food service establishment and the sanitary sewer system. If the line plugs, the sewer line may back up into the establishment, and the business will need to hire someone to unplug it.

A backup will require someone to unplug the line and could pose a serious health risk to workers and patrons.

BMP #11: Keep a Maintenance Log and All Service Records

DATE	CLEANED BY	WITNESSED BY	GALLONS PUMPED	RECIPT (YES/NO)	REMARKS

The log serves as a record of the frequency and volume of cleaning of the grease interceptor(s).

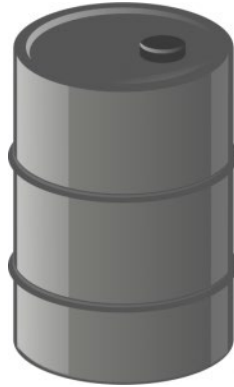
The maintenance log serves as a record of the frequency and volume of cleaning the interceptor. It is required by the pretreatment program to ensure that grease trap and grease interceptor maintenance is performed on a regular basis.

Benefit to Food Establishment:

The maintenance log serves as a record of cleaning frequency and can help the establishment manager optimize cleaning frequency to reduce cost.

The log can optimize the cleaning frequency in order to reduce costs.

BMP #12: Cover Grease Containers Stored Outdoors



Uncovered FOG can collect rainwater. Since FOG floats, the rainwater can overflow the container and flow onto the ground where it can reach the stormwater system.

Any discharge to the stormwater collection system may result in adding pollution and contamination to the Colorado River, and other stormwater collection basins.

The discharge might also result in legal penalties being imposed on the food service establishment.

BMP #13: Locate Dumpsters and FOG Containers Away from Storm Drains



The farther away from the catch basin, the more time someone has to clean up spills or drainage prior to entering the storm drain system.

The discharge of grease and oil to the storm drain system will degrade the integrity of the storm water system. In some instances, causing the ground to become impenetrable to water, causing flooding during a rain event. The Colorado River receives much of the storm water for Yuma. If FOG were to be discharged into the Colorado River, it could harm the many animal and plant species that call it home.

Discharging of FOG into storm drains can also result in fines and other legal actions.

BE AWARE of FOG dripping out of containers or dumpsters and clean it up quickly.

BMP #14: Use Absorbents for All Spills



Use absorbent pads, rags, paper towels or dry absorbent in your establishment to contain grease, oils, chemicals, or any other large spills.

DO NOT use mop to absorb large spills, or squeegee spills into floor drains, or mop sinks.

Reason:

Keeping grease and other substances out of floor drains, and mop sinks will prevent overloading of grease devices. And ensure proper flow of wastewater into the collection system and can help avoid costly repairs.

BMP # 15: Routinely Clean Exhaust Hoods



If FOG escapes through the kitchen exhaust system, it can accumulate on the roof of the restaurant and eventually start a fire or enter the storm drain when it rains.

The discharge of grease and oil to the storm drain system will degrade the water quality by adding pollutants into the Colorado River's ecological system. If FOG were to be discharged into the Colorado River, it could harm the many animal and plant species that call it home.

Discharge of grease and oil to the storm drain might also result in legal penalties or fines.

Do's and Don'ts

Do

- Scrape excess grease into a container and dispose of it in the trash or containers specifically designated for grease.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes or start a compost pile; promote the use of scraping ware prior to washing.
- Place a wastebasket in the bathroom to dispose of wastes.
- Place disposable diapers, condoms, and personal hygiene products in the trash, they do not belong in the sewer system.
- Promote the use of the 3 "R's" **R**educe **R**euse and **R**ecycle.

Don't

- Discharge fats, oil, and grease in concentrations that will cause an obstruction to the flow in a sewer, pass through or interference at a wastewater treatment facility. FOG from cooking should not be placed in the kitchen or bathroom sinks or in the toilet.
- Discharge grease, improperly shredded garbage, animal guts or tissues, paunch manure, bones, hide, hair, fleshings, entrails, or food scraps.
- Discharge wastewater with temperatures in excess of 140° F to any grease traps. This includes water from mechanical dishwashers that have a minimum required temperature of 160° F.
- Discharge waste from a food waste disposal unit to any grease traps.
- Discharge caustics, acids, solvents, soaps, enzymes, or other emulsifying agents into sinks that feed grease traps and/or interceptors.
- Discharge fats, wax, grease, or oils containing substances that will become viscous between 32° F (0°C) and 150°F (65°C).
- Utilize biological agents, chemicals, or enzymes for grease remediation without permission from the sanitary agency receiving the waste.
- Clean equipment outdoors in an area where water can flow to the gutter, storm drain, or street.
- Use the toilet as a wastebasket