

Capital Region Water (CRW) is implementing a Fats, Oils, and Grease (FOG) Program to combat the growing problem of grease in our sewer pipes. As grease builds on pipe walls, it constricts the pipe's capacity and, ultimately, causes overflows in kitchens, basements, and the street.

Restaurant owners, managers, and employees are in a special position to help fight the battle against grease. Below is useful information and best management practices that can be used to significantly reduce the amount of grease in our sewers.

What is grease?

Everyone knows that oils and grease are used for cooking, baking and preparing foods of all variety. Some are for private consumption such as in residential homes and some for commercial consumption as in restaurants and cafeterias. Few people realize that grease, fat and oil are lipid-based compounds that originate from animal and vegetable matter. Lipids are substances, including fats, greases and waxes, combined with proteins and carbohydrates that make up the structural components of living cells.

Is grease a problem?

In the sewage collection and treatment business the answer is an emphatic YES! Problems range from blocked sewer lines, rancid odors, potential health hazards, and pump station failures. Large amounts of oil and grease in wastewater causes trouble in the collection system pipes. It often decreases pipe capacity and therefore, requires that piping systems be cleaned more often and/or the replacement of piping sooner than otherwise expected. Oil and grease also hamper effective treatment at the wastewater treatment plant. Concerns caused by wastes generated by food service facilities have served as the basis for ordinances and regulations governing the discharge of grease material into the wastewater collection system. This type of waste has forced the requirement for the installation of grease control devices, commonly known as grease traps or interceptors.

What is a grease trap?

A grease trap, Figure 1, is a device that is installed inside the building or under the sink to separate and retain grease and solid materials from the waste stream while allowing the balance of the liquid waste to discharge to the wastewater collection system by gravity. Baffles in the grease trap retain the wastewater long enough for the grease to congeal and raise to the surface. Traps have a removable lid on the top surface to facilitate inspection and cleaning.

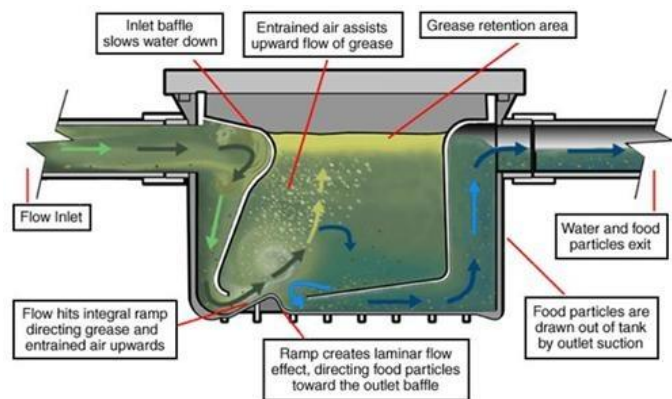


Figure 1: A grease trap is installed inside the building or under the sink to separate and retain grease and solid materials from the waste stream.

What is a grease interceptor?

The purpose of a grease interceptor, Figure 2, is to catch and collect FOG from commercial and restaurant kitchens. As wastewater flows through a kitchen's plumbing (3-compartment sinks, prep sinks, mop sinks, dishwashers, floor drains, etc.) into a grease interceptor, the FOG is intercepted or filtered out in a large underground holding tank. The capacity of the interceptor provides adequate residence time so that the wastewater has time to cool, allowing any grease time to congeal and rise to the surface where it will accumulate until the interceptor is cleaned. Once the grease interceptor reaches maximum capacity, a certified grease trap cleaning company will need to be called in order to service the grease interceptor. Failure to service a grease interceptor on a routine and timely basis can result in complete back-up of the kitchen's plumbing system. This can result in kitchen shutdown and foul odors.

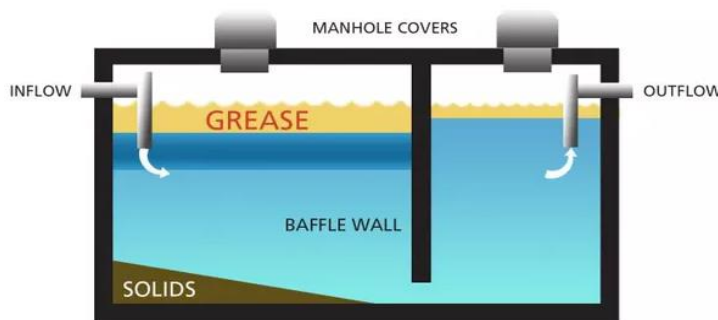


Figure 2: A grease interceptor catches and collects FOG from commercial and restaurant kitchens.

What is a “FOG disposal system”?

FOG disposal systems are engineered alternatives to traps and interceptors. They are designed to remove grease from wastewater to acceptable levels.

What are Best Management Practices?

Best Management Practices (BMPs) are practices that a food service facility operator or anyone who cooks or prepares food can utilize to minimize the amount of grease being discharged into the sewer system. The following BMPs for the owners/managers of food service establishments are to assist them in developing procedures and/or practices which effectively reduce the discharge of fats, oils and grease from their wastewater discharge include:

Prevent Grease from Entering Surface Waters through the Storm Drain System

1. Cover outdoor grease storage containers so that they do not collect rainwater. Since grease floats on water, the rainwater can cause an overflow onto the ground, which will eventually reach the stormwater system.
2. Locate grease storage containers away from storm drain catch basins.

3. Use absorbent pads or other material to clean up spilled material around outdoor equipment and grease storage containers and dispose of through solid waste procedures. Do not use free flowing absorbent material such as kitty litter that can discharge to the storm drain system.
4. Do not clean equipment outdoors in an area where water can flow to the gutter, storm drain or street.

Prevent Blockages in the Wastewater Collection System

1. Implement a training program to educate kitchen staff and other employees about how they can help ensure kitchen BMP's are followed. People are more willing to support an effort if they understand the basis for it.
2. Post NO GREASE signs above sinks and on the front of dishwashers. The signs will serve as a constant reminder for staff working in the kitchens.
3. Always use sink basket strainers to collect food wastes.
4. Dry-wipe pots and pans and dishware prior to dishwashing. This will reduce the amount of material going to the grease traps/interceptors, which will require less frequent cleaning and thereby, reducing maintenance costs.
5. Capture accumulated oil during the cleaning of work stoves and ventilation/exhaust hoods and dispose of through solid waste procedures after absorbing all free liquid.
6. Dispose of food waste by recycling and/or solid waste disposal. Recycling food waste will reduce the cost of solid waste disposal. Solid waste disposal of food waste will reduce the frequency and cost of grease trap/interceptor cleaning.
7. Use water temperatures less than 140°F in all the sinks. Temperatures in excess of 140°F will dissolve grease, but the grease can re-congeal or solidify in the wastewater collection system as the water cools. This has an added benefit for the food and beverage establishment of reducing its costs for the energy used in heating the water.
8. Recycle waste cooking oil through an established, reputable recycling facility. The food service establishment may be paid for the waste material and will reduce the amount of garbage it must pay to have hauled away.
9. Do not discharge caustics, acids, or solvents to the wastewater collection system. Caustics, acids, and solvents can have other harmful effects on the wastewater treatment system and can be hazardous to employees working in the wastewater collection system.
10. Do not use emulsifiers or surface-active agents. The use of these agents is prohibited.



Figure 3: Clean grease traps a minimum of once per week. Increase the frequency if the total volume of grease and solid material displaces more than 25 percent of the total volume of the unit.

Properly Maintain Grease Traps and Interceptors to Prevent Introduction of Grease into the Wastewater Collection System

1. Clean under-the-sink grease traps a minimum of once per week. If the total volume of captured grease and solid material displaces

more than 25 percent of the total volume of the unit, the cleaning frequency should be increased. If the grease trap is not providing adequate protection of the wastewater collection system, the establishment should consider installing a grease interceptor.

2. Clean grease interceptors routinely. Grease interceptors should be cleaned a minimum of once every three months or more frequently, if necessary, to ensure that grease accumulation does not cause the interceptor to operate poorly. Grease interceptors not cleaned regularly can produce very unpleasant odors.
3. Witness all grease interceptor cleaning and maintenance to ensure the device is properly operating. The food service establishment will ensure it is getting value for the cost of cleaning the grease interceptor. To properly clean the interceptor the entire contents must be removed, which includes the scraping of the walls, floor, baffles and pipework. The gray water should not be pumped back into the interceptor.

All residents can prevent sewer backups for yourself and your neighbors

Can your grease

Liquid cooking grease, oils, and fats harden when poured into a sink drain. As they harden, they clog sewer pipes and cause sewage to backup into your basement. Apartment buildings are even more vulnerable to backups caused by grease because of multiple kitchens draining to a single pipe.



Throw only toilet paper down the drain

Never flush anything other than toilet paper down the drain. Even wipes advertised as “-flushable” can lead to backups.

If a backup occurs because of a clog in your sewer service line, you are responsible for all repair and cleanup costs.

How to can your grease

You can still cook with all the fats, oils, and grease that your heart desires. Just put it in a can, not the drain.

1. Take left over grease and pour it into an empty soup can or some other type of container. If it's oil, pour it into a container with a cap.
2. Let the container with the grease or oil cool. You can place the container in the refrigerator for future use, if it's not full.
3. While you wait for the container to cool, use a paper towel to wipe away any remaining grease or oil on your pots or pans. You can toss this paper towel in the trash when you're finished.
4. Once the grease cools and turns solid, you can throw it in your trash. If it's still liquid, make sure you close the container to prevent making a mess.



The Benefits of Fat Free Pipes

- **Save money** - It can cost thousands to hire professionals to clean up after a basement backup.
- **Less hassle** - No basement backups means no property damage, no smelly basement, and no hassle.
- **Happier neighbors** - Grease can cause backups in sewer mains which can cause backups at every house on your street.
- **Healthier environment** - Less grease in the pipes also prevent sewage from spilling into the Susquehanna River.