

Fats, Oil and Grease Best Management Practices



FOG



Hanover County
Department of Public Utilities

Hanover: People, Tradition and Spirit

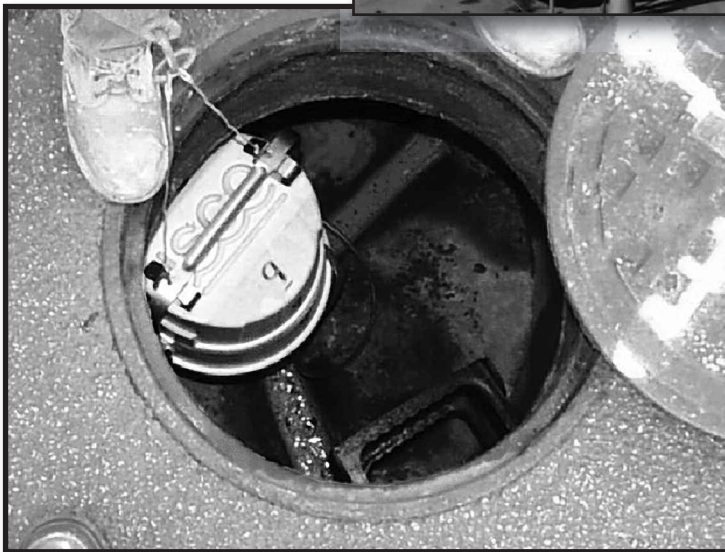
Table of Contents

Background Information	PG 2
What is FOG?	PG 3
Grease Interceptors & Grease Traps	PG 4-5
Maintenance Log & Service Records	PG 6
Witness Grease Interceptor Cleaning	PG 7
What Can You Do to Make Difference?	PG 8
Grease Containers Stored Outdoors	PG 9
Education & Training	PG 10
Grease Interceptor Inspection Program	PG 11
Strong Waste Surcharge Program	PG 12-13

Background Information

The Department of Public Utilities (DPU) developed this Fats, Oil and Grease (FOG) Best Management Practices (BMP) Manual to assist our food service/food preparation customers with the operation and maintenance of their grease interceptors and grease traps, as well as help reduce the cost of the Grease Interceptor Inspection and Strong Waste Surcharge Programs.

For additional information or inquiries, please contact our Customer Service Department at (804) 365-6024 or visit us at www.co.hanover.va.us/utilities.



What is FOG? Why is it a problem?

FOG, the acronym for Fats, Oils, and Grease, is composed of animal and vegetable fats and oils that are used to cook and prepare food. FOG should be disposed of in accordance with this manual.

Wastewater treatment systems are similar to the human body's circulation system. Wastewater flows through pipes (similar to arteries), is pumped at pump stations (like the heart), and then is cleaned at the wastewater plant (kidneys).

FOG that is flushed or poured down the drain clogs pipes in the sewer system just like cholesterol clogs arteries. This causes the pumps to work harder and can cause them to fail, just like having a heart attack.

In addition to system failures, FOG can cause backups in your sewer service lateral, which in turn can cause sewage to back up in your business.

DPU regularly conducts cleaning and maintenance of sewer pipes and pump stations due to the effects of FOG buildup. As maintenance costs continue to rise, so will user rates in an effort to offset the time and money

spent keeping the county sewer system and sewer pipes FOG free.



Grease Interceptors & Grease Traps: What are they and how do they work?

A grease interceptor/trap is a small reservoir built into drains a short distance from the grease accumulating area. Baffles in the reservoir slow down the wastewater flow and reduce turbulence allowing the grease and water to separate. While grease naturally rises to the surface, solids fall to the bottom, and the trap system retains the grease and solids, allowing cleaner wastewater to flow into the sewer system. The grease and accumulated solids must be removed from the trap periodically.

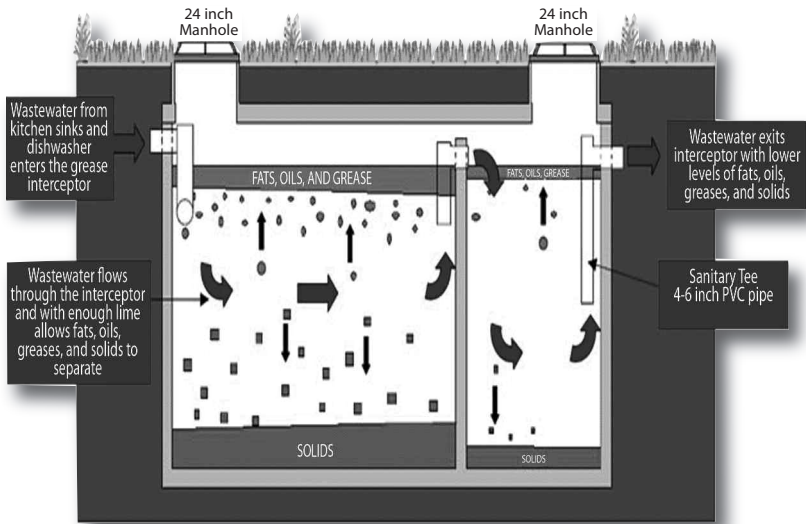
Grease traps are generally small units located inside the kitchen area. Typically the capacity of these traps is less than 100 gallons, and they need to be cleaned often due to their small size.



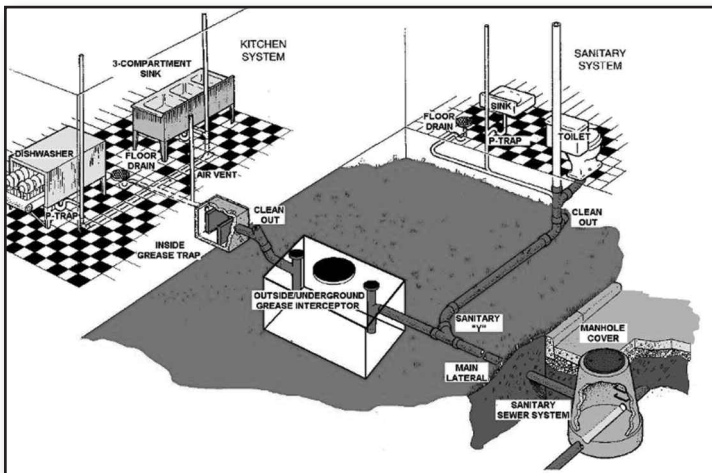
Under sink traps have less storage volume than grease interceptors. Daily or weekly cleaning by the establishment's staff will reduce the risk of clogs and backups.

Grease interceptors are larger versions of grease traps. Typically, grease interceptors are 500 to 1,000 gallons and are located outside of the building buried underground. Grease interceptors operate in the same manner as grease traps, but are generally more

efficient due to their larger size and longer detention time.



A sewer line backup due to FOG can pose serious health risks to workers and patrons and is costly to repair. Routine cleaning will prevent plugging of the sewer line between the food service establishment and the sanitary sewer system and will help to reduce expenses related to FOG.



Keep a Maintenance Log and All Service Records

A Maintenance Log should be kept as a record of the frequency and volume of interceptor cleaning. This log can help optimize the cleaning frequency of the grease interceptor and help to manage costs.

In addition, service records afford the county inspector the opportunity to verify compliance. Service records verify the accuracy of the maintenance logs and are required by Hanover County Code to be available at the time of the inspection.

All maintenance logs, invoices and records should be kept in a location available to all managers and supervisors.

Grease Trap / Interceptor Cleaning Log

FSE Name: _____
 Address: _____

Type of grease control device (circle one): External - Under Sink - In the Floor
 Size of Tank: _____ gallons

Minimum cleaning frequency for Grease Trap (internal) is every 2 weeks. Minimum cleaning frequency for Grease Interceptor (external) is every three months. Actual cleaning frequencies may vary.

Date Cleaned	Cleaned by (service company or person)	% Removed Grease and Settled Solids	Initials of Owner or Authorized Representative *

* Any falsification, misrepresentation, or misleading information VOIDS this maintenance log sheet. I hereby certify that I am the Owner or that I have authority on behalf of the Owner to make entries to the foregoing maintenance log sheet and that the information contained on this sheet is correct.

Signature of Owner / Authorized Representative _____

Witness Grease Interceptor Cleaning

A designated representative from your facility should observe and monitor all grease interceptor pump-outs to ensure that proper and complete pumping procedures are followed. A hauler with grease interceptor cleaning experience should be used for grease interceptor pump outs. It is important to establish a business relationship with your hauler so you can work together to optimize your interceptor cleaning frequency.

Witnessing the cleaning will ensure all chambers and piping are cleaned and in good condition. Be sure the hauler sprays down all walls of the interceptor to break up the grease layer. Accumulated solids must be removed along with the grease layer to allow the interceptor to work most efficiently. Witnessing the cleaning also ensures that your food service establishment is getting the full value for the cost of cleaning and that it is being done correctly. This is also a great opportunity to note any defects or damage to the system and to make arrangements for corrections.



What Can You Do to Make a Difference?

Emptying containers before they are full and using a cover when transporting materials that could spill are both effective ways of preventing FOG spills. If a spill occurs, block off floor and sink drains near the spill. Cover the spill with absorbent material and remove the spilled material by placing it in the garbage.

Use a “dry” clean up method such as scraping, wiping or sweeping before using a “wet” method. Dispose of dry clean waste in non-leaking trash containers. Wet methods typically wash the water and waste materials down the drain where it eventually collects on the interior of pipes.

Place food scraps or waste into waste containers or garbage bags for disposal with solid wastes.



Wiping the FOG and food that remain in pots and pans and on dishware before washing will reduce the amount of FOG and food solids that enter the grease trap or interceptor.



Placing the FOG residue and food remains in the trash, will result in less frequent cleaning of grease interceptors and traps, saving maintenance costs and related charges.

Cover All Grease Containers Stored Outdoors

Uncovered FOG containers can collect rainwater, and since FOG floats, the rainwater can overflow the container. FOG can then spill on the ground where it can flow into the storm water system or into streams.



Be aware of FOG leaks or spills and clean them up quickly. Locate all dumpsters and FOG containers away from storm drains, as this allows more time to clean up any spills. Any discharge to the storm water system may result in biological or chemical contaminants entering local receiving waters.

Spills can result in legal penalties being imposed on the food service establishment by the local Health Department, the State Department of Environmental Quality (DEQ), or the Federal Environmental Protection Agency (EPA). The county inspector is required to notify these agencies of any wrongful discharge into the storm water system.

Education & Training

A successful FOG program begins with education and training of ALL food service personnel. This training is equally important for kitchen staff as well as other personnel involved in the food service business. This training will help ensure Best Management Practices (BMPs) are implemented and become an integral part of the kitchen operation.

Conspicuously Post No Grease Signs



Post these signs in restrooms, over sinks, near all floor drains, near all dishwashers, mop sinks, and anywhere else that water may enter a drain to the sewer. These signs will serve as a constant reminder for staff working with FOG.

Grease Interceptor Inspection Program

The DPU Grease Interceptor Inspection Program provides for periodic inspection of grease interceptors at food service/food preparation facilities. The goal of these inspections is to ensure proper and adequate operation and maintenance of these devices by their owners and to reduce the volume of FOG that reaches the DPU owned and maintained sanitary sewer system.

Unannounced inspections may be conducted on a routine basis throughout the year with all external, in-ground interceptors being inspected annually. A 10-point grading system is used to evaluate the condition of the grease interceptor with a seven point or higher grade being required to pass. The inspection covers items such as accessibility and general physical conditions of the interceptor, average grease and solid accumulation, effluent quality, downstream grease accumulation, and maintenance documentation. Each inspection item is assigned points and graded accordingly. If the total score is below seven points then the inspection fails and the customer will be informed of the results and of the required corrective actions. Unannounced re-inspections are scheduled after a failed inspection, with consideration given to the type and severity of the deficiency. The re-inspection fee is applied to the customer's next utility bill. Re-inspections, with their associated fee, will continue until a passing score is achieved. However adequate time for repairs will be allowed.



Strong Waste Surcharge Program

The Strong Waste Program requires monitoring commercial discharges for biochemical oxygen demand (BOD) and total suspended solids (TSS). The surcharge program in Hanover County, similar to most municipalities, assigns an additional fee or surcharge, to sewer bills for customers that discharge strong waste. Strong waste is defined as any wastewater that is stronger than household or domestic wastewater. Customers that discharge strong waste will be charged this additional fee to offset increased operation, maintenance and treatment costs.

It is important to note that you have some control over this surcharge by lowering FOG discharges and controlling your BOD/TSS concentrations. Actions taken to reduce FOG and BOD/TSS are often the same.

Applicable sections of Hanover County Sewer Code

Sec. 20-24. Same--Commercial I, Commercial II.

(g) Grease interceptor re-inspection fees. The fee for re-inspections as provided for in section 20-46.1 shall be:

- (1) Up to two (2) grease interceptors per site. . . \$85.00
- (2) Additional grease interceptors per site. . . . \$42.50

Sec. 20-46.1. Grease interceptors required.

All new food preparation facilities, such as restaurants, commercial kitchens, bars, cafeterias, clubs, schools, jails and grocery stores connected to the public sewer system shall be required to instgrease interceptor for the retention of grease, fat and oil-laden drainage from fixtures and equipment in such commercial, industrial, governmental or institutional food preparation areas. Existing facilities in noncompliance with the provisions of this code section shall have ninety (90) days from notification by the department to install a county approved grease interceptor, upon determination by the director that oil and grease laden discharge exceeds the County Code limits.

Costs for the installation and maintenance of the interceptor shall be borne by the customer. No sanitary sewage shall be discharged into the interceptor. The grease interceptor shall be located so that it remains accessible for periodic inspections by county personnel. The fee for such reinspection shall be as provided in section 20-24(g) of this chapter. It shall be the responsibility of the customer to provide proper maintenance, upkeep, and clean-out of the grease interceptor. Failure to install an adequate grease interceptor or to provide proper maintenance, repair and upkeep shall constitute a violation of this chapter subject to the provisions of section 20-48. In addition, such violation may result in the discontinuance of county water and/or sewer service, including plugging the sewer line, by the director upon seven (7) days written notice of any violations to the customer or without notice if the director determines the violations pose an immediate threat to the health, safety or welfare of the public, or the environment or the county sewerage system.

[Ord. No. 94-16, § 1,2-22-95; Ord. No. 04-07, § 1,4-14-04]

Sec. 20-48. Penalties; restraining, etc.; violations.

Any person violating the provisions of this chapter will be guilty of a Class 1 misdemeanor punishable by a fine of not more than one thousand dollars (\$1,000.00). In addition to the foregoing, the county attorney is hereby authorized to take the appropriate action by injunction or other appropriate proceeding to restrain, correct, or abate as the case may be, any violation or attempted violation of this chapter or any regulation adopted hereunder. The county attorney is further authorized to take the appropriate actions by mandamus or otherwise so as to compel enforcement by any state or federal authority of any rules or regulations adopted to regulate any of the activities set out in this chapter.

[Ord. No. 82-34, § 2, 1-26-83]

The Mission of the Department of Public Utilities is "to provide water and wastewater services that, within regulatory guidelines, meet or exceed our customers' needs and expectations for safety, quality and quantity; to provide these services at a competitive price and in a fair and equitable and environmentally responsible manner, and to provide opportunities for personal and professional development for employees at all levels of the department."

With your partnership we can continually work toward the goals established by Hanover County Department of Public Utilities.



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