FOG: Fats, Oils & Grease
From the Pan to the Can

Baltimore City Department of Public Works – Bureau of Water and Wastewater

In collaboration with the City of Baltimore Department of Housing and Community Development and the Baltimore City Health Department

cleanwaterbaltimore

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Introduction to the FOG Program

Every day, significant quantities of fats, oils and grease (FOG) generated during food preparation and clean up are discharged to Baltimore's sewer system. The FOG solidifies on the walls of the pipes, eventually blocking the flow of wastewater. When this happens, wastewater backs up into private properties, typically through kitchen or basement fixtures, or overflows into the environment. Untreated wastewater can pose serious health risks to the public and the resulting property damage can be expensive to clean up.

In 2002, the Baltimore City Department of Public Works (DPW) entered into a Consent Decree with the U.S. Environmental Protection Agency and the Maryland Department of the Environment to improve water quality and eliminate sanitary sewer overflows (SSOs) through improvements to the sewer system citywide. The Consent Decree requires the City to implement a comprehensive FOG Program in addition to other remedial measures.

The City of Baltimore, under the authority of Article 25 of the Baltimore City Code and in accordance with the State of Maryland and federal regulations, established a program to minimize the discharge of fats, oils and grease to the sanitary sewer system (FOG Program). The Program has a two-pronged approach that manages FOG from both the private and public sides of the property line by:

- Requiring all food services establishments that have the potential to discharge FOG-laden wastewater to have an adequate grease control device, and
- Abating fats, oils and grease in the sewer lines using a commercial grade degreaser.

City-Customer Partnership

The Baltimore City Department of Public Works' goal is to develop a strong partnership between the City and food service establishments by encouraging all users of the sewer system to do their part to minimize the amount of FOG discharged and to comply with the requirements of the FOG Program. The City will perform periodic inspections to ensure non-residential dischargers are implementing FOG control solutions, including but not limited to kitchen best management practices and adequate cleaning and maintenance of grease control devices. Education will also play an important role in the FOG Program, as City staff will provide facilities with information about ways to implement or improve their practices. Ultimately, this partnership will minimize grease-related blockages that often result in sanitary back-ups or sanitary sewer overflows.

Impacted Facilities

All food service establishments that discharge, or have the potential to discharge, FOG-laden wastewater to the City's sewer system are required to comply with the FOG Program. Examples of impacted facilities include:

- Restaurants
- Carry outs
- Pizzerias
- Delis
- Convenience stores
- Caterers
- Hospital and school cafeterias
- Nursing homes and assisted living facilities
- Coffee shops
- Ice cream parlors

The Problem With FOG

FOG discharged to the sewer system causes:

- Clogged pipes;
- Sewage back-ups through kitchen or bathroom fixtures;
- Sewage discharges into the environment, including the harbor and Chesapeake Bay;
- Expensive clean up and replacement of damaged property; and
- Foul odors.

Program Goals

The FOG Program aims to:

- Maintain compliance with the Clean Water Act and requirements set forth by the Consent Decree;
- Eliminate dry-weather, grease-related sanitary sewer overflows;
- Minimize the amount of FOG discharged to the sewer system;
- Improve current grease control device maintenance practices;
- Educate all users of the sewer system about kitchen best management practices.

Program Requirements

All food service establishments that discharge or have the potential to discharge FOG-laden wastewater must be in compliance with the FOG Program requirements described below:

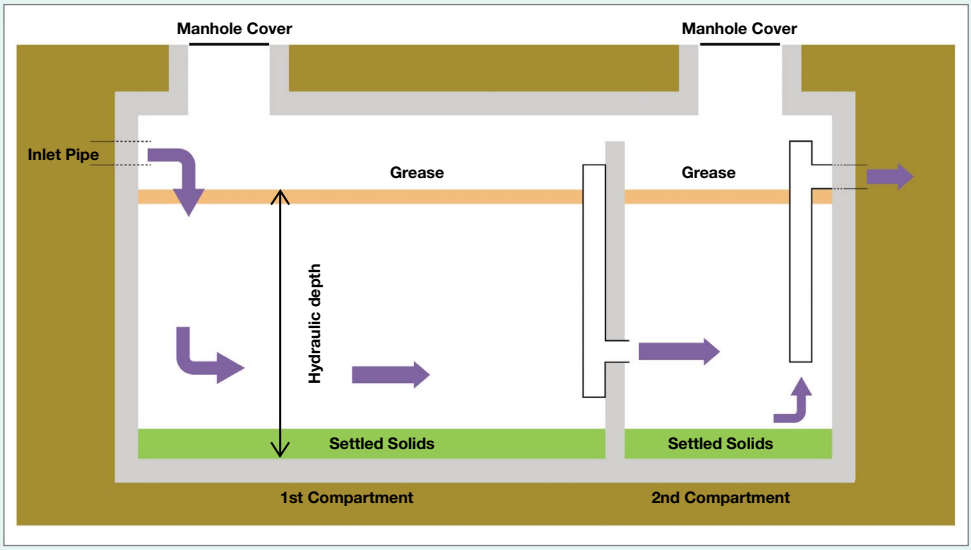
- **Have a valid wastewater discharge permit.** DPW Pollution Control Section issues these permits to non-residential users of the sewer system;
- **Have a properly sized, installed, and functioning grease control device.** To be effective, all grease control devices are to be sized and installed in accordance with the Baltimore City Plumbing Code;
- **Clean and maintain the grease control devices frequently enough to comply with the 25% Rule*.** Cleaning frequency will depend on the number of fixtures discharging to it, the seating capacity of the establishment and the volume of the device. Implementing kitchen best management practices can reduce the required cleaning frequency;
- **Keep a grease control device maintenance log up-to-date and on-site.** The maintenance log must document all grease control device inspection, maintenance and disposal activities performed. In addition, records such as waste hauler manifests must be retained for three years;
- **Properly collect and dispose of FOG.** FOG should be disposed of as solid waste or stored in a covered, leak-proof receptacle until it can be taken off-site by a licensed hauler.

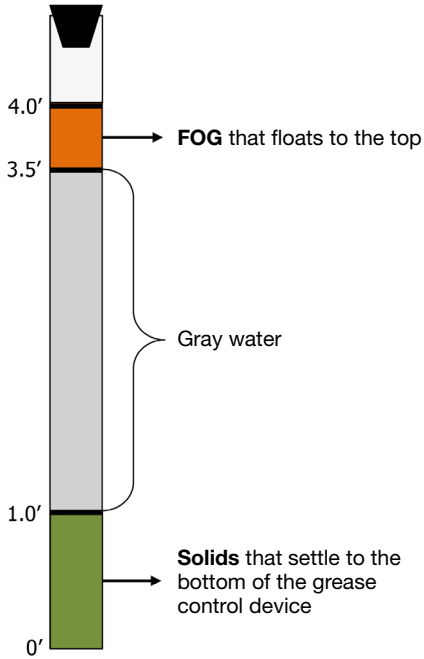
*Compliance with the 25% Rule means that the accumulation of solids settled at the bottom of the device and the grease floating on the top does not exceed 25% of the hydraulic depth, as measured from the static water level to the interior tank bottom.

Explanation of the 25% Rule

Example Calculation

Is this device in compliance with the 25% Rule?





Does this example meet the 25% rule?

- Total FOG at top of the device = 0.5 ft.
- Total solids at bottom of the device = 1.0 ft.
- Total depth of device contents = 4.0 ft.

Percentage of FOG + solids:

$$\frac{\text{(FOG + solids)}}{\text{Depth of interceptor contents}} = \frac{\text{(0.5 ft. + 1.0 ft.)}}{\text{4.0 ft.}}$$

$$= \frac{\text{1.5 ft.}}{\text{4.0 ft.}} = \mathbf{37.5\%}$$

Answer: No, the 25% rule is not met and the food service establishment needs to increase the cleaning frequency or add capacity.

Purpose of the Grease Control Device

The two most common types of grease control devices are the **large outdoor gravity interceptor** and the **hydro-mechanical grease trap** located near the fixture(s) it serves. Both types of devices separate the FOG from the wastewater, allowing the FOG-free wastewater to discharge to the City's sewer system. The effectiveness of each device is dependent on frequent clean out and maintenance.

What the FOG Program Means to You

- **More frequent inspections.** Currently inspections are performed in response to a problem in the collection system. DPW is now taking a proactive approach to minimizing the FOG problem by conducting unannounced inspections to verify compliance with FOG Program requirements.
- **More emphasis on keeping grease out of the sewer system.** All grease-generating food service establishments will be required to have and maintain grease control devices, regardless of past practices.
- **The inspector will open and test the grease control device for compliance with the 25% Rule.**

What To Expect When You Are Inspected

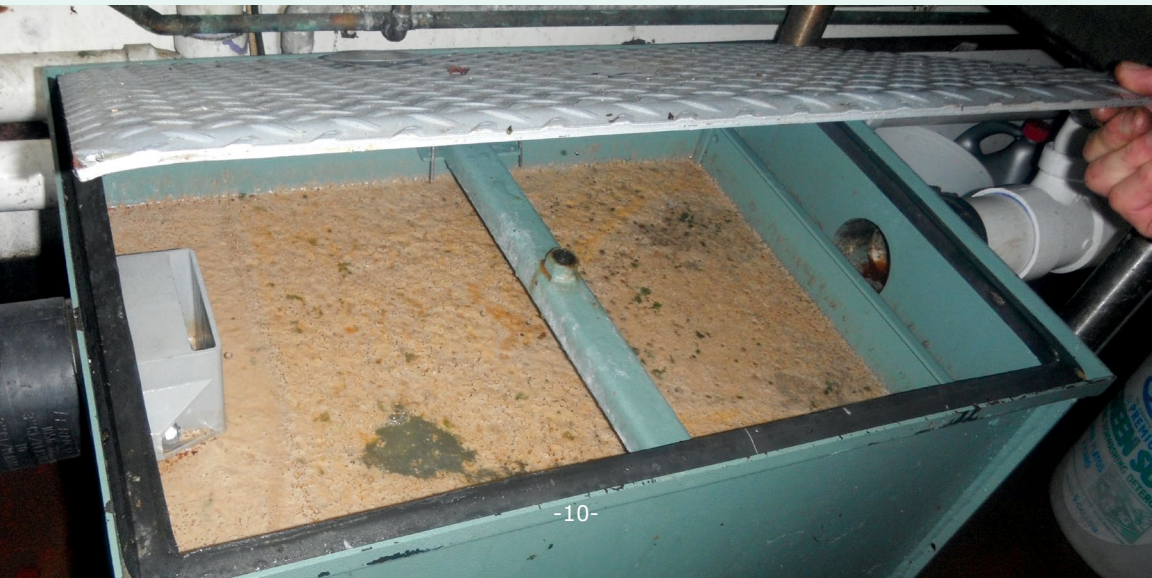
- A properly identified DPW inspector will visit your facility to explain the FOG Program and review information related to kitchen best management practices and FOG management.
- The inspector will provide you with a poster listing best management practices for grease control, frequently asked questions, and a sample maintenance log.
- As a food service establishment manager/owner, you will have an opportunity to describe your grease control device cleaning and FOG handling practices.
- If your facility generates grease-laden wastewater and does not have a grease control device, you will be required to install one.
- During the initial inspection, the inspector will explain the purpose of a maintenance log and will request to see this log during subsequent inspections.
- If your facility has a grease control device, the inspector will check to see that the device is properly installed, check the cleaning frequency recorded on the maintenance log, and check to see that the device is being maintained in accordance with the 25% Rule.
- Yellow and brown grease disposal methods will be observed.
- The inspector may take photos to document compliance status.
- The inspector may ask to see a copy of your Wastewater Discharge Permit.

Enforcement

The Baltimore City FOG Program will be enforced through a combination of permit issuance, inspection and education. Enforcement action for violations of the FOG Program is in accordance with Article 25 of the City Code and the Pretreatment Enforcement Response Guide.

Maintenance Guidelines for Grease Control Devices

- Clean the grease control device frequently enough to continually comply with the 25% Rule.
- Remove floating grease, liquids and solids from the grease control device.
- The grease control device should be left completely empty upon completion of maintenance.
- Under no circumstances should the contents of the grease control device be discharged to the City's sewer.
- Flushing the device with hot water, chemicals or emulsifying agents is strictly prohibited.
- Make sure baffles are secure and in place.
- Inspect the grease control device frequently for cracks, corrosion or other defects.
- Ensure the lid is secure and properly seated after inspection or maintenance.
- Check that the inlet and outlet tees are not clogged or loose.
- Document all cleaning and maintenance activities.



Other Things You Can Do

- Empty grease containers before they are completely full to prevent overflows.
- Check the grease control device regularly.
- Do not discharge FOG down drains, sinks, or storm drains.
- Ensure grease control devices are accessible for maintenance and inspection.
- Use garbage grinders as sparingly as possible.
- Clean grease spills with absorbent material and then dispose of in the garbage.
- Never empty waste from a deep fryer into a sink or floor drain.
- Collect and empty grill scrapings and fryer vat grease into a grease recycling container.
- Do not pour excess food or liquid food (e.g., dairy products, milk shake syrup, batters, gravy, or dressings) down the drain.
- Use a licensed hauler to dispose of spent grease. Limited quantities of brown grease may be disposed of with the regular garbage.
- Dry wipe dishes before washing to remove grease.
- If there is little or no FOG in the grease control device, verify that it is installed correctly.
- Use detergents instead of soap; soap contains oil.
- Never dispose of sewage or kitchen waste into a storm drain.
- Never put FOG removed from the grease control device into the sewer system.
- Know the location of the grease control device.

Contact Information

For more information about the FOG program or to find out if you need a wastewater discharge permit, contact

POLLUTION CONTROL SECTION
410-396-9695
pollutioncontrolsection@baltimorecity.gov

For questions about installing a grease control device or for more information about the Baltimore City plumbing code, contact

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
410-396-3360
http://www.baltimorehousing.org/permits

Notes

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Bureau of Water and Wastewater
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Baltimore, Maryland 21202

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Innovative Solutions:
Protects our public health and improves the water quality of our streams, rivers, harbor and the Chesapeake Bay.

For more information, visit us online at cleanwaterbaltimore.org.

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Printed on recycled and recyclable paper.

FOG Manual 9/13