

**City of Columbus
Fats, Oils, and Grease (FOG) Reduction Program**

Why Did the City of Columbus Need a FOG Reduction Program?

A leading cause of sewer blockages across the U.S. is the accumulation of FOG in the sanitary sewers. The greasy waste enters the sewers through connections from homes, food service establishments (FSE), and industrial wastewater dischargers.

FOG blockages may cause sanitary sewer overflows into local waterways and backups into basements of nearby homes and businesses. When homeowners have to hire a plumber to remove grease from their sewer service line, rates vary from \$200 - \$400 the first hour for response, with additional charges for extra time and after-hours service calls.

A basic grease blockage service call costs the Columbus Division of Sewerage and Drainage (DOSD) at least \$2,000 to respond. If the blockage causes a sewer overflow, the City must pay fines for the discharge into the environment. The maintenance costs associated with the blockages are passed along to all sewer rate payers. These additional costs would be unnecessary if the problem did not exist. Clearly, the prevention of grease entering our sewers is the key to solving the problem.

FOG Reduction Program Overview

DOSD developed a FOG Reduction Program consisting of four main elements outlined below. These changes apply to all FSE located within the City of Columbus and to the 22 municipalities* that contract with the City of Columbus for wastewater treatment.

* The 22 communities that contract with Columbus for wastewater treatment include: Bexley, Brice, Dublin, Gahanna, Grandview Heights, Grove City, Groveport, Hilliard, Lockbourne, Marble Cliff, Minerva Park, New Albany, Obetz, Reynoldsburg, Riverlea, Shawnee Hills, Upper Arlington, Urbancrest, Valleyview, Westerville, Whitehall and Worthington.

- Columbus City Code Chapter 1145.04 (B) requires outside interceptors to be installed for all new or remodeled FSE.
- Columbus City Code Chapter 1145.20 (B) requires all FSE in the City's service area to develop and implement a FOG BMP to handle FOG-laden wastes. A key element of the FOG BMP requires FSE to maintain a Grease Interceptor Cleaning Log.
- Director's Rule 08-01 establishes grease interceptor cleaning practices for trucked waste haulers licensed with the City of Columbus. The rule also requires licensed trucked waste haulers to completely fill out the FSE Grease Interceptor Cleaning Log(s) or to communicate the pertinent information to personnel of the FSE. Please note this Director's Rule regulates only those trucked waste haulers that are licensed with the City of Columbus.
- Director's Rule 15-04 establishes a minimum cost recovery charge of \$2,000.00 per typical blockage incident attributed to the improper disposal of grease. Cost recovery assessments for sewer blockages requiring more than four hours of effort to correct could be higher.
- Director's Rule 02-13 establishes local limits for the control of discharges of wastewater to the Columbus sewerage system. Wastewater discharges cannot exceed a Hydrocarbon FOG concentration of 200,000 micrograms per liter or equivalent 200 parts per million.

Definitions

- **FOG BMP** – Fats, Oils, and Grease Best Management Plan
- **Gravity Grease Interceptor** – a device located underground and outside of a food service facility designed to collect, contain or remove food wastes and grease from the wastewater while allowing the balance of the liquid waste to discharge to the wastewater collection system by gravity. Gravity grease interceptors shall have at least one inspection hatch on the top surface to facilitate inspection, cleaning and maintenance.
- **Hydro mechanical Grease Interceptor** – a device located inside a food service facility or under a sink designed to collect, contain or remove food wastes and grease from the wastewater while allowing the balance of the liquid waste to discharge to the wastewater collection system by gravity. Hydro mechanical grease interceptors shall have a removable lid on the top surface to facilitate inspection, cleaning and maintenance.
- **Food Service Establishment (FSE)** – a commercial facility engaged in preparing or serving food for consumption by the public, such as but not limited to: restaurant, commercial kitchen, cafeterias, nightclubs, delicatessen, meat cutting-preparation, bakeries, bagel shops, grocery stores, caterer, hotel, school, hospital, correctional facility or care institution.

Instructions for the FOG BMP (Please note, all examples are illustrative and are not necessarily applicable for your facility)

Item 1 – List FOG sources:

- Food preparation
- Grease from cooking – grill troughs, deep fryer, hood filters, etc.
- Food wastes – fats and grease from meats, salad dressings, butter, oils, etc.
- Kitchen utensils and equipment
- Kitchen cleaning and maintenance

Item 2 – Handling/cleaning/facility practices to minimize discharge of FOG or buildup in sewer lines:

- All new employees will review FOG BMP.
- "No Grease" signs have been posted above the three-compartment sink and mop sinks.
- Employees have been instructed to scrape all food wastes into the trash.
- Employees have been instructed to use paper towels to wipe FOG from kitchen equipment and serving ware prior to washing.
- Employees have been instructed to dump waste FOG into proper barrel or receptacle for off-site disposal.
- Implementation of menu changes (such as changing to baked fries) to limit FOG generation.
- Employees have been instructed to conserve water; this will allow the grease interceptor to work more efficiently.
- Employees have been trained to use the proper concentrations of cleaners and soaps to improve grease interceptor effectiveness.

Item 3 – List routine inspection and maintenance procedures of the grease interceptor, including any contract cleaning company used and grease interceptor cleaning frequency. Attach a copy of the manufacturer's Operations and Maintenance procedures for the grease interceptor(s) if available:

- The condition of the grease interceptor(s) will be checked each time it is cleaned. If the condition is not satisfactory, the Facility Manager will be notified.
- The cleaning frequency should be based on the manufacturer's instructions and the rate of grease and solids buildup in the interceptor(s). Weekly or even daily cleaning may be appropriate for many hydro mechanical grease interceptor applications. Frequent cleaning of hydro mechanical grease interceptors will improve efficiency and significantly reduce odors by not allowing wastes in the interceptor to become septic.
- If a contract cleaning company is used, please provide the name of the vendor and the frequency in which the grease interceptor is cleaned.
- The manufacturer's recommendations or instructions for proper operation and maintenance of the grease interceptor(s) shall be kept with the FOG BMP if available. If recommendations or instructions from the manufacturer are not available, the FSE shall develop operation and maintenance procedures based on best professional judgment. See below for instructions to aid development of Operations and Maintenance procedures when the manufacturer's instructions are not available.

Developing Operations and Maintenance Procedures without Manufacturer's Instructions

Hydro mechanical Grease Interceptors

- The Plumbing & Drainage Institute (1998, Revised 2010). Guide To Grease Interceptors: Eliminating the Mystery. Retrieved from: <http://static1.1.sqspcdn.com/static/f/1395156/20895451/1352262159947/Guide-To-Grease-Interceptors.pdf?token=jRyubWwjAsluNCtRMVdwg3lr5zo%3D>.

Gravity Grease Interceptors

- National Precast Concrete Association. Operation and Maintenance for Precast Concrete Grease Interceptors. Retrieved from: <http://precast.org/wp-content/uploads/2014/08/Grease-Operation-Manual.pdf>.

All Grease Interceptors

- The City of Columbus has established a Hydrocarbon FOG local limit of 200 parts per million.
- The City of Columbus recommends maintenance when a grease interceptor nears, but does not exceed 25% capacity.

Certification Statement

An Authorized Facility Representative shall sign their name, title and date. Note: FOG BMP, Grease Interceptor Cleaning Log(s) and other associated documentation must be maintained on-site and available for review upon request by Columbus Public Health and DOSD personnel.

Instructions for the Grease Interceptor Cleaning Log

Following each cleaning event, the following information must be recorded on the Grease Interceptor Cleaning Log: date cleaned; gallons or percent of grease and solids removed; and grease interceptor condition.

Date Cleaned

- A facility representative or the contract cleaning company shall record the date the grease interceptor was cleaned.

Gallons or Percent of Grease and Solids Removed

- Record the gallons or percent of grease and solids removed - not the total volume of liquid removed.

Grease Interceptor Condition

- Each time the grease interceptor is cleaned, inspect and record the condition of the interceptor on the log as "satisfactory or unsatisfactory". If the condition is "unsatisfactory," indicate what steps have been taken to correct the condition.

Following ten cleaning events, the Certification Statement is signed and a new Grease Interceptor Cleaning Log is started. **All Grease Interceptor Cleaning Log(s) shall be kept with the FOG BMP for a minimum of three years.**

Certification Statement

- An Authorized Facility Representative shall sign their name, title and date after ten cleaning events. Note: FOG BMP, Grease Interceptor Cleaning Log(s) and other associated documentation must be maintained on-site and available for review upon request by Columbus Public Health and DOSD personnel.

For More Information:

- Please visit <https://www.columbus.gov/Templates/Detail.aspx?id=38173&id=38173>

Contact the Division of Sewerage and Drainage, Industrial Wastewater Pretreatment Group:

- Email: FOG@columbus.gov
- Phone: (614) 645-5876