



**FREDERICK**

DEPARTMENT OF PUBLIC WORKS

# Fats, Oil and Grease (FOG) Control Program Manual

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## INTRODUCTION

The City of Frederick Fats, Oil and Grease (FOG) Control Program is designed to protect residents, businesses and the environment from sanitary sewer backups and overflows resulting from the accumulation of FOG waste in the sanitary sewer system discharged from non-residential users involved in the preparation or serving of food or beverages. These backups and overflows can be a serious health concern, and depending on the severity of the incident, costly to clean up. This source of pollution is preventable by the installation and proper maintenance of a pretreatment device as well as the implementation of Best Management Practices (BMPs) by a user that uses or generates FOG in food preparation.

This FOG Control Program Manual has been written for Food Service Establishments (FSEs). It contains procedures for reducing the amount of FOG in wastewater discharged from the FSE. Food service establishments include, but are not limited to, bakeries, cafeterias, churches, grocery stores, hospitals, hotels, motels, nursing homes, restaurants, and school kitchens. The FOG Control Program attempts to assure regulatory compliance with the least amount of burden to the FSE. The main objectives of the FOG Control Program are:

- To assist FSEs to remain in compliance with Federal, State, and Local environmental regulations, specifically, the City of Frederick Industrial Pretreatment Ordinance;
- Prevent sanitary sewer system overflows;
- Reduce the amount of FOG discharged to the sanitary sewer system; and
- Reduce maintenance costs due to FOG in the sanitary sewer collection system and the wastewater treatment plant.

The legal authority for the City to implement a FOG Control Program is provided by Federal pretreatment standards, State pretreatment standards, and the City of Frederick Code of Laws. The FOG Control Program will be evaluated by the Wastewater Treatment Plant Superintendent periodically and will be modified as necessary to maximize the effectiveness of the program.

## AUTHORITY

The United States Environmental Protection Agency (EPA) developed the national pretreatment program, to prevent harmful pollutants from entering the sewer system that could cause damage to the Publicly Owned Treatment Works (POTW) or pass-through the POTW untreated and pollute the environment. The EPA required the City to implement and enforce a local pretreatment program to regulate non-residential users of the POTW. The FOG Control Program is part of the City's Industrial Pretreatment Program that was established in 1986.

All non-residential users of the City's POTW are subject to regulation under the national and local pretreatment programs. Commercial, industrial, institutional and manufacturing establishments that introduce pollutants into the POTW are referred to as "industrial users" or "users". In the City, wastewater discharged by industrial users is regulated by a variety of means including wastewater discharge permits or other control mechanisms, depending on the significance of the discharge to the POTW.

The City's pretreatment program is implemented through various manuals, such as this one, and enforced through the Enforcement Response Plan and the FOG Control Enforcement Guideline. Legal authority for the specific provisions of this program presently exists in the Code of Laws of the City of Frederick, Appendix L, Industrial Pretreatment Ordinance, herein referred to as the "Ordinance".

## DEFINITIONS

**"Best Management Practices (BMPs)"** means the schedule of activities, prohibitions of practices, maintenance procedures, and other management policies enforced to prevent and reduce pollutants entering the waters of the state.

**"Food Service Establishment (FSE)"** means a place where food or drink is prepared for sale or service on the premises or elsewhere, including bakeries, cafeterias, churches, grocery stores, hospitals, hotels, motels, nursing homes, restaurants, and school kitchens but excluding residential kitchens, farmer's markets and bake sales.

**"Grease trap"** means a device designed to separate and retain waterborne grease and other undesirable matter from the waste stream while allowing the balance of the liquid waste to discharge to the sanitary sewer system. "Grease trap" includes grease interceptors and grease recovery devices.

**"Liquid Waste Hauler"** means any person or business that collects, pumps, transports and/or disposes of FOG waste with a valid Frederick County Liquid Waste Hauler permit.

**"Ordinance"** means the City of Frederick Maryland Charter and Code of Laws, Appendix L, Industrial Pretreatment Ordinance.

**"Pollutant"** means dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, medical wastes, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, municipal, agricultural and industrial wastes, and certain characteristics of wastewater (e.g., pH, temperature, Total Suspended Solids, turbidity, color, Biochemical Oxygen Demand, toxicity, or odor).

**"Publicly Owned Treatment Works (POTW)"** means any devices or systems owned by the City which is used in the collection, storage, treatment, recycling and reclamation of sewage or industrial waste of a liquid nature and any conveyances which convey wastewater to a treatment plant.

**“Superintendent”** mean the person designated by the City to supervise the operation of the Wastewater Treatment Plant or the Superintendent’s designee.

**“Twenty-five Percent Rule (25% Rule)”** means the standard for the determination of grease trap maintenance requirements to ensure the minimum design requirements for FOG removal are met, such that the combined FOG (including floating solids) and settled solid accumulation in the device does not exceed 25% of the grease traps overall liquid depth.

**“User” or “Industrial User”** means a non-residential source of wastewater containing pollutants discharged into the POTW.

## **GENERAL REQUIREMENTS**

### **FOG Control Wastewater Discharge Permit**

All non-residential establishments that prepare, process or serve food or beverages as determined by the Superintendent must apply to the City for a Wastewater Discharge Permit. An existing FSE must apply for a FOG Control Wastewater Discharge Permit within 30 days of receiving the FOG Control Wastewater Discharge Permit Application from the City. A new FSE must apply and obtain a FOG Control Wastewater Discharge Permit prior to discharging. Failure to apply and submit the completed application along with the required fees shall subject the FSE to enforcement actions.

FOG Control Wastewater Discharge Permit contents may include, but are not limited to, the following:

1. Permit duration;
2. Effluent limitations based on applicable general pretreatment standards, local limits or state and local law;
3. A statement that the wastewater discharge permit is non-transferable;
4. Grease trap operation and maintenance requirements;
5. Record keeping requirements;
6. A statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements;
7. A statement of permission for the Superintendent and other duly authorized employees of the City to enter upon the user’s property without prior notification for the purpose of inspection, observation, photography, records examination and copying, measurement, sampling or testing; and
8. Other conditions deemed by the Superintendent necessary to ensure compliance with the Ordinance, this program and other applicable ordinances, laws and regulations.

## **Waste Cooking Oil Storage and Removal**

The disposal of wasted cooking oils into storm water drainage pipes or the sanitary sewer is prohibited. All waste cooking oil must be collected and stored properly in receptacles such as holding tanks, oil bins or drums. The container must be stored on an impervious surface such as concrete or pavement. Containers must be capable of being sealed to prevent entry of precipitation or debris. During storage, all waste cooking oil storage containers must be sealed and surrounding areas must be maintained in a clean and sanitary condition at all times. Waste cooking oil must be disposed of by a Frederick County permitted Liquid Waste Hauler or a waste cooking oil recycler.

## **GREASE TRAP INSTALLATION**

The City's Ordinance prohibits the discharge of wastewater containing any solid or viscous substance in quantities or of size capable of causing obstruction in the sanitary sewer system or the wastewater treatment plant. To ensure compliance, all FSEs with the potential to discharge FOG into the City's POTW must have a grease trap installed and maintained, at the user's expense. Other commercial, institutional or industrial users may also be required to install a grease trap when deemed necessary by the Superintendent.

The Superintendent may require a FSE to provide an appropriate sampling port to self-monitor their wastewater discharge for FOG, Biochemical Oxygen Demand, Total Suspended Solids, Total Phosphorus, and Total Kjeldahl Nitrogen at the user's expense. All monitoring results must be submitted to the Superintendent. In addition, as a condition of discharging to the system, the FSE may be monitored by the City without prior notice.

The following must **NOT** be discharged into any grease trap:

1. Wastewater discharged with temperatures exceeding 140 °F;
2. Wastewater from dish washing machines using chemical agents to emulsify grease;
3. Ground food residue from food grinders or garbage disposals;
4. Sanitary waste; and
5. Additive such as bacteria, enzymes, emulsifiers, or similar chemicals.

### **New and Remodeled Establishments**

All new and renovated FSEs will be required to install and maintain a grease trap, at the user's expense. Grease trap size, type and location must be determined by a qualified engineer or trained professional in accordance with the current requirements of the National Standard Plumbing Code and the City's Plumbing Code.

## **Existing Establishments and New Establishments Located in Existing Buildings**

All existing FSEs and new FSEs located in existing buildings having the potential to discharge FOG must install and maintain a grease trap meeting the same requirements for installation and design as for new establishments.

Where it is demonstrated to the Superintendent that the installation of an approved outdoor grease trap is not feasible or physically impossible to install, then an adequate and approved "under-the-counter" grease trap may be allowed for use on individual fixtures, including sinks and other drains that have the potential to be laden with grease. These devices must be installed as near as possible to the source of wastewater.

An existing FSE may be required to verify and provide documentation that the establishment's grease trap size, type and location are in accordance with the current requirements of the National Standard Plumbing Code and the City's Plumbing Code. An existing FSE whose grease trap is determined to be under-sized, substandard, or not adequately maintained to prevent floatable FOG or solids from entering the wastewater collection system shall be notified, in writing, of the deficiencies, required improvements, and provided a compliance deadline. The FSE will be required to provide a schedule whereby corrections will be accomplished.

## **Exemption from Installation Requirements**

**Impractical Due to Existing Conditions.** If the FSE demonstrates to the Superintendent that the installation of a grease trap is impractical due to existing conditions or grease trap installation would conflict with other applicable laws or standards, the FSE shall comply with the following requirements:

1. Construct an appropriate sampling point at the user's expense;
2. Locate the sampling point in a manner that provides ready and easy accessibility for inspection and sampling;
3. Maintain sampling point in an effective operating condition; and
4. Apply and obtain a High Strength Wastewater Discharge Permit and pay additional fees for the treatment of high strength discharge.

**Business Type Conditional Waiver.** A FSE determined to have no immediate adverse impact on the City's POTW due to business type may be granted a Conditional Waiver from the grease trap installation requirement. To obtain a Conditional Waiver, a FSE must complete a request on a form provided by the City. The FSE granted a Conditional Waiver shall be subject to City FOG Control Inspections to evaluate Ordinance compliance. A Conditional Waiver may be revoked at any time for violating any conditions of the waiver or the Ordinance.

# GREASE TRAP OPERATION AND MAINTENANCE

Grease trap maintenance is critical to the grease trap's performance. Each FSE is required to maintain the grease trap in satisfactory operating condition by the periodic removal of the entire contents of the grease trap. All costs for inspections, pumping, sampling, analysis, or other maintenance is the responsibility of the FSE owner or operator. The property owner of a commercial property is responsible for the installation and maintenance of a grease trap that serves multiple FSEs that are located on a single parcel or development. To ensure the grease trap is working as it was designed, the following maintenance procedures are required.

## 1. Content Removal

Maintenance must include the complete removal of the entire contents, including floating materials, wastewater, settled solids and grease accumulated on the side of the device. Decanting or discharging of removed waste or wastewater back into the grease trap from which the waste or wastewater was removed or any other grease trap for the purpose of reducing the volume to be disposed of, is strictly prohibited. No FOG that has accumulated in a grease trap is allowed to pass into any sewer lateral, sewer system, storm drain, or public right of way during maintenance activities.

## 2. Maintenance Frequency

Required maintenance frequency will be state is the FSE's FOG Control Permit. Unless otherwise authorized by the Superintendent, all grease traps must be pumped out completely by a Frederick County permitted liquid waste hauler whenever the accumulation of grease and solids reaches 25% of the grease trap's overall liquid depth or at least once every 90 days whichever is more stringent. Exception to this minimum frequency of pumping may be made with special written approval from the Superintendent for generators of small quantities of grease waste. In no case will the frequency of pumping be less than once every six months.

## 3. Prohibition of Additives

The introduction of additives such as bacteria, enzymes, emulsifiers, or similar chemicals designed for the purpose of emulsifying or controlling FOG discharge into grease traps or associated plumbing is strictly prohibited.

## 4. Waste Hauler

All FSEs must ensure that all recovered contents of the grease trap are removed and disposed of by a Frederick County permitted Liquid Waste Hauler unless otherwise authorized by the Superintendent.

## Self-Cleaning Interior Grease Trap

A FSE requesting to self-clean the grease trap must submit a self-cleaning maintenance request on a form provided by the City and receive authorization from the Superintendent to self-clean their interior grease trap. A FSE may receive authorization to maintain their interior grease trap(s) provided:

1. The grease trap is no more than 50 gallons in liquid retention capacity;



2. Proper on-site material disposal methods are demonstrated and implemented (e.g. absorb liquids into solid form and dispose into trash, and collected grease is transported by a Frederick County permitted Liquid Waste Hauler);
3. The grease and floatable solids must be removed a minimum of once every seven days and the entire contents of the grease trap is removed from the grease trap and baffles at a minimum of once every 30 days, unless otherwise authorized by the Superintendent; and
4. All records of grease trap self-cleaning maintenance must be hand written with permanent ink and logged in a City approved format.

Grease trap self-cleaning maintenance logs must include, at a minimum, the date and time of cleaning, name of person cleaning, grease disposal location, total gallons removed, and name of person witnessing the cleaning. The maintenance logs must be readily available for inspection and retained on-site for a minimum of three years.

Violations of the Ordinance, Wastewater Discharge Permit or this program incurred by the FSE performing grease trap self-cleaning may subject the FSE to enforcement actions and the FSE may be required to hire a Frederick County permitted Liquid Waste Hauler to perform grease trap maintenance for the remaining duration of the FSE's FOG Control Permit.

### **Grease Trap Maintenance Observation**

A representative of the FSE must witness and observe each grease trap cleaning event and document the following, if applicable:

1. The grease hauler has a valid Frederick County Liquid Waste Hauler Permit; or in the case of self-cleaning, documentation of proper grease trap cleaning training for the person performing the cleaning as well as the person witnessing the cleaning.
2. No material is discharged from the waste hauler's truck into the grease trap prior to pumping.
3. All contents of the grease trap are removed including any buildup on the walls and bottom of the grease trap.
4. Contents removed from the grease trap are not reintroduced.

## **BEST MANAGEMENT PRACTICES (BMPs)**

All FSEs are required to implement BMPs in order to prevent and reduce the quantity of FOG discharged to the grease trap, sanitary sewer system, and storm sewer system. The FOG Control Program provides guidance and recommendations of BMPs for FSE, however, due to the variety of establishments discharging FOG wastewater, it is recommended that each FSE adopt and create BMPs that work for the establishment's needs.

## **Employee Training**

All employees are required to be trained on and made aware of all required and recommended BMPs for preventing FOG from entering the sewer system. They must have a general knowledge of the function of the grease trap. New employees must be initially trained within one week of employment. Each employee must receive periodic refresher training at intervals not to exceed one year. Documentation of BMPs employee training must be kept on-site at the establishment for three years and made readily available for review by the City's Superintendent.

## **Structural Controls**

All FSEs must post a "NO GREASE" sign or a "NO FOG" sign above the kitchen sinks and on the front of dishwashers written in the languages most commonly spoken by employees. Drain screens or solids traps must be installed in kitchens sinks, mop sinks and floor drains.

## **Housekeeping**

1. Minimize the usage of soaps and degreasers in sinks that lead to the grease trap.
2. Recycle waste cooking oil and other grease products. Never pour FOG down any drain.
3. Establish a schedule and stand operating procedures for cleaning grease-laden areas (e.g. fryers, vents, grills, etc.)
4. Dry wipe or scrape plates, trays, cooking utensils, pots, and pans before washing. Place the scraped food and other materials in trash receptacles.
5. Clean up spills immediately.
6. Dry sweep floors prior to washing and mopping. Place collected material from sweeping in trash receptacles.

# **FOG CONTROL COMPLIANCE REPORT**

A FOG Control Compliance Report along with any additional documents as required in the FSE's FOG Control Permit must be submitted to the Superintendent on a quarterly basis, unless otherwise authorized by the Superintendent. The Compliance Report must contain, at a minimum, the following:

1. A FOG Compliance Report cover form certified and signed by the authorized representative of the FSE.
2. A copy of the waste hauler service statement from a Frederick County permitted Liquid Waste Hauler for each pumping event, if applicable;

3. Self-cleaning maintenance logs or grease trap maintenance observation logs; and
4. Any records of information obtained pursuant to grease trap repair or maintenance.

Unless otherwise instructed by the Superintendent, FOG Control Compliance Reports are due according to the following:

<b>Reporting Period</b>	<b>Due Date</b>
January 1 – March 31	April 15 <sup>th</sup>
April 1 – June 30	July 15 <sup>th</sup>
July 1 – September 30	October 15 <sup>th</sup>
October 1 – December 31	January 15 <sup>th</sup>

## RECORD KEEPING

The FSE must retain for a minimum of three years and make available for inspection and copying the following records:

1. Grease trap maintenance and repair service statements;
2. Grease trap self-cleaning maintenance logs or grease trap maintenance observation logs;
3. Waste cooking oil hauler or oil recycler statement of service for waste cooking oil removal including method and location of disposal;
4. Wastewater discharge sampling chain of custody and analysis reports; and
5. BMPs Employee Training Logs.

## FOG CONTROL INSPECTION

### **Routine Inspections**

Routine FOG Control Inspection frequencies may vary depending on the FSE's compliance history. During a routine inspection, the Superintendent will verify, at a minimum, that the following conditions of the FOG Control permit are met:

1. Grease trap operation and maintenance;
2. Implementation of BMPs;
3. Waste cooking oil storage and removal; and
4. Record keeping.

If the FSE's grease trap is found to contain an accumulation of FOG and settled solids that exceeds the 25% Rule, the FSE will be required to have the grease trap pumped out within a time frame determine by the Superintendent. The inspector may return within 14 calendar days to re-inspect the grease trap. The fee for the re-inspection shall be \$150 per grease trap. In the event the grease trap is not pumped out within the required time frame, the FSE may be liable to the City of Frederick for not more than \$1,000 per violation, per day.

If the FSE's grease trap is found to contain a FOG and settled solids accumulation that exceeds the 25% Rule or if FOG is found in the FSE's lateral sewer line connecting to the City's main sewer line, the FSE may be required to have the on-site plumbing system from the FSE to the City's main sewer line professionally cleaned of all accumulated FOG by a Frederick County permitted Liquid Waste Hauler within a time frame determined by the Superintendent. In the event the required maintenance is not performed within the required time frame, the City may perform the required maintenance. The City shall bill the FSE for costs incurred by the City for any cleaning, repair, or replacement work caused by the violation or discharge. Refusal to pay the assessed costs will constitute a separate violation of the Ordinance.

### **Additional Inspections**

In addition to routine inspections, a FSE may be inspected in response to any of the following criteria:

1. To verify corrective action has been taken to achieve compliance to any violation found during a routine inspection;
2. The FSE has not submitted a required Compliance Report or the Compliance Report was submitted late or incomplete;
3. The City has received a complaint or a tip that the FSE is in noncompliance of the Ordinance or the FOG Control Program;
4. The FSE is suspected of causing a sanitary sewer blockage or sanitary sewer overflow; or
5. Other situations that the Superintendent deems necessary.

## **FOG CONTROL ENFORCEMENT**

The Superintendent may bring enforcement actions for noncompliance with the FOG Control Program, as authorized by the Ordinance. A FSE found in violation of the Ordinance will be subject to the enforcement actions set forth in the FOG Control Enforcement Guideline including penalties and severance of water and sewer service.

### **FOG Control Notice of Violation**

When the City finds that any FSE has violated, or continues to violate, any provision of the Ordinance, a wastewater discharge permit or order issued, or any other pretreatment standard or requirement, the City may serve upon that FSE a written Notice of Violation (NOV). A NOV may require that corrective action be completed by a given date. Fines

for municipal infractions may be imposed, as well as consideration for discontinuance of water and sewer services to the property. Primary reasons for the issuance of a FOG Control NOV are, but not limited to the following:

1. Failure to complete and return the City's request for a FOG Control Wastewater Discharge Information form or Wastewater Discharge Permit Application by the given due date;
2. Failure to install or repair a grease trap by assigned date;
3. Failure to properly operate and maintain a grease trap in accordance with the Ordinance or an issued Wastewater Discharge Permit;
4. Failure to provide an approved collection drum or container for waste cooking oil by assigned date;
5. Failure to maintain waste oil storage container and surrounding areas in a clean and sanitary manner to prevent harm to environment from runoff;
6. Failure to maintain grease trap maintenance records on site;
7. Failure to provide FOG Compliance Report along with grease trap maintenance records to the Superintendent within a specified time;
8. Failure to pay appropriate fees or fines; or
9. Failure to allow the Superintendent access to the facility or grease trap to observe conditions, obtain information, or perform sampling related to discharges to the City's sanitary sewer system on a given date.

### **Additional Enforcement Action**

The City will take additional enforcement action against the FSE as the violation warrants. The Superintendent shall be responsible for determining if additional action is required based on consideration of the following factors:

1. The seriousness of the violation, including magnitude, duration and effect on the receiving water or operation of the POTW;
2. The likelihood of the violation continuing;
3. The appropriateness of initial corrective action initiated by the FSE;
4. The prior compliance history of the FSE;
5. The appropriateness of a punitive response;
6. The need to eliminate an economic benefit resulting from the facilities failure to take earlier corrective action;
7. The need to deter similar violations at similar facilities; and
8. Other factors the City deems appropriate.