Fats, Oils and Grease (FOG) Management

From time to time, The Utility experiences problems with fats, oils and grease (FOG) collecting and clogging sewers in the City of Lawrence. FOG coming from food service establishments as well as residential customers and multi-family dwellings (i.e. apartments) all contribute to these problems.

When dumped down the drain, there is an economic loss due to problems caused in the sewer system. FOG blocks pipes and greasy solids increase the cost of treating waste at our wastewater treatment plants. The City expends additional funds to maintain sewers and lift stations in order to maintain the operational reliability of the sewage collection system. Ratepayers bear these costs and the costs contribute to increased sewer rates. Lastly, clogged lines increase the potential for sewage back-ups into homes, businesses, and streams.

The City of Lawrence recommends that food service establishments utilize a service to clean, inspect and maintain grease traps and interceptors properly. We strongly encourage all food establishment operators who elect to clean their own grease traps to use the following maintenance procedures and best management practices. A sample maintenance log to document cleaning dates is included at the end of this document. This log is important during inspections, as the inspector will require it during inspections.

Residential customers should follow best practices by:

- Wiping pots, pans and other cooking implements with a paper towel and disposing of in the trash
- Collecting grease in an appropriate container with a tight-fitting lid and disposing of in the trash

Note: You cannot effectively remove grease by running hot water with dishwashing detergents that claim to remove grease. All that happens is that you waste water, and the energy used to

heat that water, and your detergent. As the grease-laden water makes its way down the drain, it cools due to contact with pipes in the ground and the grease then separates and coagulates. Detergents do not magically transform grease into something other than grease.

Best Management Practices for Grease Traps

The City of Lawrence Utilities' Grease Trap/Interceptor device permitting program includes: plan review and approval procedures on new construction, facility review during tenant/owner changes that may result in a change of use of a retail space, inspections and investigative activity related to sewer backups determined to be caused by Fats, Oils or Greases (FOG).

The required maintenance frequency for grease traps (GT's) is directly related to the amount of FOG a facility discharges to the GT. Incorporating Best Management Practices (BMPs) into your operations can greatly reduce the amount of FOG generated. In most cases, facilities that implement effective BMPs will realize financial benefits by reducing the required GT maintenance frequency, minimizing the amount of FOG material generated for disposal, and avoiding potential fines and enforcement actions.

The city's sewer ordinance in Section 5-1-2-1 sets forth requirements for grease interceptors (aka "grease traps"):

(C) *Grease interceptors.* A grease interceptor meeting the requirements of the City Civil Engineer and the Director shall be installed in waste lines (building sewers) from establishments delineated in § 5-1-1-4(G). The design and location of the grease interceptor shall be submitted to the Department for approval.

Section 5-1-1-4 states:

(G) A grease interceptor shall be installed in the waste line leading from sinks, drains and other fixtures or equipment in restaurants, cafes, lunch counters, cafeterias, bars and clubs; hotel, hospital, sanitarium, factory or school kitchens; or other establishments where grease may be introduced into the drainage or sewage system in quantities that can affect line stoppage or hinder sewage treatment. The characteristics, size and method of installation of the grease interceptor shall meet the requirements imposed by the City Civil Engineer and shall be reviewed and approved by the City Civil Engineer prior to the commencement of installation. Approval of proposed facilities or equipment does not relieve the person of the responsibility of enlarging or otherwise modifying the facilities to accomplish the intended purpose. On a showing of good cause, the City Civil Engineer may waive this requirement. A grease interceptor is not required for individual dwelling units or for any private living quarters.

BMPs that reduce FOG generation include:

1. Monitoring GTs at least weekly and clean them when FOG reaches 20% of the GT depth.

2. Disposing of waste cooking oil (deep fryer oil) through an established recycling company and never down the drain.
3. "Dry wiping" pots, pans, and dishware prior to dish washing to minimize the discharge of FOG and solids
4. Disposing of food wastes using solid waste removal or recycling rather than using garbage disposals.
5. Having a manager or supervisor to verify all GT cleaning and maintenance activities to ensure that the device is operating properly.

Grease Trap Maintenance (Interior Units)

Grease Trap Cleaning Frequency

1. Grease Interceptors will not keep FOG out of your waste lines and the City's sewers once the floatable FOG material and the settled solids have accumulated to 25% of the total operating depth of the GT. Grease traps need to be checked at least weekly and will generally need to be cleaned at that time.

2. Determine the total operating depth by measuring the internal depth from the bottom of the GT discharge pipe (the water line) to the bottom of the GT. You should assume that 5% of the GT's content will be settled solids, therefore, the maximum amount of FOG material should be no more than 20%. To calculate the maximum amount of FOG material that is allowed, you need to multiply the depth of your GT by 0.20 (i.e. 20%). The result is the maximum depth for FOG that is allowed in your GT.

3. **FOR EXAMPLE:** If your GT's depth is 20 inches, the maximum depth of FOG allowed is:
    i. 20 inches X 0.20 = 4 inches

    Therefore, never allow more than 4 inches of FOG to accumulate in a 20 inch GT.

4. Self-cleaners or cleaning service providers need to skim off all floating liquid and solid FOG and food wastes from the top of the GT and place the mixture in a waste container. Use a flat-bladed tool, such as a putty knife, to remove all of the food wastes from all sides of the GT and the baffles. Remove GT baffles, if possible, to ensure thorough maintenance.

5. You must replace removed baffles prior to replacing the GT cover. Combine liquid and solid FOG material in a waste container with absorbent material to absorb all of the free liquid. Dispose of absorbed FOG material in a sealed container or plastic bag and ensure that it is properly sealed and disposed of.

RECORDS FOR GREASE TRAPS INCLUDE, BUT ARE NOT LIMITED TO:

- The date of service,
- the service company (for self-cleaners, a supervisor's name),
- the nature of the service,
- total volume removed if applicable,
- and the disposal method.

Please note that some outside FOG handling units are larger units located outside and are typically referred to as "grease interceptors". These units, typically installed for large food service establishments, commercial kitchens/cafeterias, etc., are maintained by a service and are not addressed here. Oil/grease separators, typically found in such places as automotive repair and maintenance facilities, are not part of this document. Information on these types of units may be obtained by contacting the Utility Business Office at the number below.

Questions? Call the City of Lawrence at (317) 542-0511.

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GREASE INTERCEPTOR MAINTENANCE FORM (example)

FACILITY INFORMATION

NAME: ____
ADDRESS: ____
PH/EMAIL: ____
CONTACT: ____

SERVICE PROVIDER

NAME: ____
ADDRESS: ____
PH/EMAIL: ____
CONTACT: ____
LICENSE/PERMIT NO.: ____

MAINTENANCE/INSPECTION LOG

DATE:_____________ ACTION PERFORMED: ____
VOLUME REMOVED (US GALL/CU FT): ____
NATURE OF MATERIAL REMOVED: ____
DISPOSAL METHOD: ____
SIGNATURE OF MAINTENANCE TECHNICIAN: ____

DATE:_____________ ACTION PERFORMED: ____
VOLUME REMOVED (US GALL/CU FT): ____
NATURE OF MATERIAL REMOVED: ____
DISPOSAL METHOD: ____
SIGNATURE OF MAINTENANCE TECHNICIAN: ____

DATE:_____________ ACTION PERFORMED: ____
VOLUME REMOVED (US GALL/CU FT): ____
NATURE OF MATERIAL REMOVED: ____
DISPOSAL METHOD: ____
SIGNATURE OF MAINTENANCE TECHNICIAN: ____

DATE:_____________ ACTION PERFORMED: ____
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