City of Hodgenville, Kentucky

Wastewater Department

Fats, Oils and Grease **(FOG)** Management Program



Prepared by:

Kentucky Rural Water Association

April 2014

**City of Hodgenville, Kentucky Wastewater Department**

Fats, **Oils** and Grease **(FOG)** Management Program

# PURPOSE:

The Kentucky Department for Environmental Protection has required Hodgenville's Wastewater Department to implement a fats, oils, and grease (FOG) management program. These guidelines are intended to facilitate and ensure compliance with Hodgenville’s FOG management program. The accumulation of fats, oils, and grease (FOG) within the collection system (sewer lines and pump stations) and the wastewater treatment plant is an increasingly frequent problem for the City of Hodgenville. These accumulations can cause decreased carrying capacity due to congealed FOG inside the sewer pipes and pumps that make up the collection system. Once these lines become constricted, blockages in the collection system increase. Blockages in the collection system lead to sanitary sewer overflows {SSOs) which significantly degrade the quality of local receiving streams and the surrounding environment. Aside from the environmental harm inflicted, SSOs can be potentially harmful to humans and animals as the wastewater spilt during an SSO event is untreated and possibly contains dangerous contaminants. SSOs and the back-ups they cause are extremely costly to Hodgenville and its affected customers. The goal of the FOG program is to prevent Hodgenville's collection system blockages, obstructions and overflows caused by the contribution and accumulation of FOG from food service establishments.

# DEFINITIONS:

Additives: Include, but are not limited to products that contain solvents, emulsifiers, surfactants, caustics, acids, enzymes, and bacteria intended to break down the composition of discharged FOG causing it to more easily pass through the grease control equipment.

Best Management Practices: Schedules of activities, prohibitions of practices, maintenance procedures and other management practices that reduce the discharge of fats, oils, and grease (FOG) to the collection system and wastewater treatment plant.

Certified Waste Hauler/Plumber: Individuals having received hauler/plumber certifications from the City of Hodgenville.

Fats. Oils and Grease {FOG): Organic polar compounds derived from animal and/or plant sources.

Food Service Establishment (FSE): Any establishment, business, facility, or user engaged in preparing, serving or making food available for consumption. Single family residences are not FSEs. At the discretion of the City of Hodgenville, FSEs will be classified as follows:

Class 1: Day Care Facilities (NAICS 624410 and 624120), Delis (NAICS 445210), Beverage Bars in the sale of cold-cut and microwaved sandwiches/subs with no frying or grilling on-site (NAICS 722213), Ice Cream and Frozen Yogurt Shops (NAICS 311520), Coffee Shops (NAICS 722135), Mobile Food Vendors (NAICS 722330), and Commercial and Industrial Break Rooms. The City of Hodgenville reserves the right to add or subtract categories from this class if deemed necessary.

Class 2: Limited-Service Restaurants/Fast Food Restaurants (NAICS 722211), Caterers (NAICS 77320), Supermarkets/Grocery Stores (NAICS 445110), Convenience Stores and Gasoline Stores with Convenience Stores that engage in the on-site preparation of food (NAICS 445120 and 447110), Discount Department Stores that engage in the on-site preparation of food (NAICS 452112). The City of Hodgenville reserves the right to add or subtract categories from this class if deemed necessary.

Class 3: Full-Service Restaurants (NAICS 722110). The City of Hodgenville reserves the right to add or subtract categories from this class if deemed necessary.

Class 4: Buffet and Cafeteria Facilities (NAICS 722212). The City of Hodgenville reserves the right to add or subtract categories from this class if deemed necessary.

Class 5: Institutions: Schools (NAICS 611110), Hospitals (NAICS 622110), Prisons (NAICS 922140), Nursing Care Facilities (NAICS 623110), etc. The City of Hodgenville reserves the right to add or subtract categories from this class if deemed necessary.

Exemption: A release from the requirement to install grease control equipment. Exemptions are granted by the City of Hodgenville based on responses to questions on the City of Hodgenville's exemption form and/or on-site inspection of the facility requesting the exemption.

Existing Food Service Establishment: An FSE having already begun service as an FSE prior to the effective date of the City of Hodgenville's FOG program.

Fryer oil: Oil that is used and/or reused in fryers for the preparation of foods, such as fried chicken, french fries, etc. (i.e., waste oil, yellow grease).

Garbage disposal: A kitchen appliance designed to grind food particles to a small enough size to dispose to a sink drain.

Grease (Brown): Fats, oil and grease that is discharged to the grease control equipment or is from kitchen or food prep wastewater.

Grease (Yellow): Fats, oils and grease that has not been in contact or contaminated from other sources (water, wastewater, solid waste. etc.) and can be recycled.

Grease control equipment: Devices for separating and retaining FSE wastewater fats, oils, and grease prior to entering Hodgenville's wastewater collection system. Grease control equipment is constructed to separate and hold or trap fats, oils, and grease substances from the wastewater collection system. Grease control equipment should only receive kitchen wastewater. Devices include grease interceptors, grease traps, or other devices approved by the City of Hodgenville.

Grease interceptor: A grease interceptor is identified as a large multi-compartment tank, usually 1,000-to-2,000-gallon capacity, with the proper inlet and outlet Ts and other necessary components, that provides fats, oils, and grease control from an FSE. No sanitary wastewater line shall be connected to the grease interceptor. Grease interceptors shall be located outside the FSE.

Grease trap: Grease control equipment identified as an "under the sink" trap, a small container with baffles or a floor trap. For an FSE approved to install a grease trap, the minimum size requirement is the equivalent of a 2S gallon per minute/SO pound capacity trap. Grease traps shall have a flow control restrictor and a vent pipe.

Grease recycle container: A container used for the storage of yellow grease.

Multi-unit facility: A single building or facility with multiple separate but adjoining units, each with separate plumbing and possibly utilities.

NAICS: North American Industry Classification System.

New Food Service Establishment: An FSE which begins service as an FSE after the effective date of Hodgenville's FOG program. (Note: An FSE which has a change in ownership but not a change in use is not a new FSE).

Series: (grease interceptors installed in series): Grease interceptor tanks are installed one after another in a row and are connected by plumbing pipe.

Significant remodeling: Modifications made to an existing FSE sufficient to require issuance of a building permit or the temporary closure of the FSE for building renovation or as deemed "significant remodeling" by the City of Hodgenville.

Single service kitchen: An FSE that does not prepare food on-site (heat and serve only) and which uses only disposable service ware (utensils and dishes).

Tee or T (influent and effluent): AT-shaped pipe extending from the ground surface below grade into the grease interceptor to a depth allowing recovery (discharge) of the water layer

located under the layer of fats, oils and grease. Influent and effluent Ts are required to be made of PVC Schedule-40 or equivalent material. Influent Ts should extend 2/3 of the grease interceptor's water depth and the effluent T's should extend to within 12 to 15 inches of the bottom of the interceptor tank to prevent short-circuiting.

User: Any person that contributes, causes or permits the contribution or introduction of wastewater or pollutants into Hodgenville's wastewater collection system whether intentional or unintentional and whether direct or indirect.

Water (Black): Wastewater containing human waste from sanitary fixtures such as toilets and urinals.

Water (Gray): Wastewater other than black water as defined in this section.

Sanitary sewer overflow (SSO): **A** condition whereby untreated sewage is released into the environment prior to reaching the treatment facilities thereby escaping wastewater treatment.

## RESPONSIBILITIES:

1. All potential existing FSEs which discharge to Hodgenville's wastewater collection system must receive a FOG discharge permit application from the City of Hodgenville.
2. Potential new FSEs applying for sanitary sewer service with the City of Hodgenville must receive a FOG discharge permit application from the City of Hodgenville.
3. An FSE which receives a FOG discharge permit application shall complete and return the form to the following address:

# City of Hodgenville

Attention: Wastewater Superintendent PO Box189

Hodgenville, KY 42748

***Note:*** *Failure to complete and submit the FOG discharge permit application is a violation of the City of Hodgenville's FOG management program and shall make the FSE subject to enforcement actions and/or fines.* Those FSEs receiving an application which feel they should be exempted from all or portions of the FOG management program shall contact the City of Hodgenville's Wastewater Superintendent and request a FOG management exemption form. The Wastewater Superintendent can be reached by calling 270-358-3832 and referencing the City of Hodgenville's FOG management program.

1. The City of Hodgenville **will** evaluate all FOG discharge permit applications which it receives. Each FSE will receive a classification and an appropriate FOG discharge permit.
2. FOG discharge permits **will** be valid for one (1) year with the option to renew the permit annually.

6. Each FSE receiving a FOG discharge permit will be required to pay an annual fee of

**$50.00** which includes an annual permit fee and annual inspection fee (whether an inspection is performed or not during that year). If the City of Hodgenville must perform more than one (1) FOG inspection per year at any given FSE due to the FSE's failure to comply, then that FSE **will** be charged an inspection fee of **$25.00** each additional inspection over the annual inspection. The FOG discharge permit and inspection fees shall be applied to the FSE's water and sewer service bill.

1. FSE's under the jurisdiction of the City of Hodgenville shall abide by the rules, regulations and requirements set forth in its FOG discharge permit, this FOG program policy guide and the City of Hodgenville's sewer use ordinance.
2. Waste/wastewater removed from the FSE's grease control equipment shall be disposed of in a manner that is in accordance with all applicable federal, state, and local laws.
3. FSEs shall work to ensure that measures are in place to prevent FOG discharges to Hodgenville's wastewater collection system in amounts that contribute to blockage.
4. FSEs that permanently close for business shall completely evacuate and clean all grease interceptors on the premises and shall fill the grease interceptors with water to prevent odors, deterioration and shifting.

# REQUIREMENTS:

1. Grease control equipment shall be installed and maintained by the FSE.
2. Grease control equipment shall be designed in accordance with the provisions of the City of Hodgenville's FOG management policy and the following guidelines:
	1. Final grease control equipment sizing determination will be made by the FSE's engineer, architect or contractor (with City of Hodgenville approval) based on criteria such as, but not limited to, flow rate, discharge rate, fixture ratings and wastewater retention time.
	2. Minimum acceptable size of grease control equipment for each FSE classification will be as follows:

**Class 1-** 25 gallons per minute/SO pound grease trap

**Class 2** -1,000-gallon grease interceptor

**Class 3** -1,000-gallon grease interceptor

**Class 4** -1,000-gallon grease interceptor

**Class 5-** 2,000-gallon grease interceptor, or two 1,000-gallon grease interceptors in series

* 1. The City of Hodgenville will review grease control equipment sizing information received from the FSE's engineer, architect, or contractor. The City of Hodgenville will make a decision to approve or require alteration(s) to the FSE's grease control equipment.
	2. If grease control equipment is installed in a series, the equipment shall be installed so that the inlet invert of each successive tank shall be a minimum of 2 inches below the outlet invert of the preceding tank.
1. New FSEs (Class 2-5), as well as existing FSEs (Class 2-5) undergoing significant remodeling, shall install and maintain, at a minimum, an approved 1,000-gallon grease interceptor located outside the FSE's building. Grease interceptors shall be constructed of durable materials able to withstand abrupt and extreme changes in temperature as well as any anticipated load that may be placed upon the grease interceptor. Grease interceptors shall be water and gas tight. Grease interceptors shall have access provided by at least one (1) manhole entrance over each grease interceptor division (baffle chamber} to allow for inspection and cleaning of the grease interceptor and its internal pipes and fittings.
2. New FSEs (Class 1), as well as existing FSEs (Class 1} undergoing significant remodeling, shall install and maintain at a minimum a grease trap which size is rated 25 gallons per minute/SO pounds capacity.
3. New construction of FSEs shall have separate sanitary (restroom} and kitchen process

lines. Kitchen process lines shall be plumbed to appropriately sized grease control equipment. Kitchen process lines and sanitary lines shall not combine prior to the discharge of the grease control equipment.

1. When an existing building and/or building's plumbing is being renovated and the facility is an FSE, internal plumbing shall be constructed/reconstructed to separate sanitary (restroom} flow from kitchen process flow. These lines shall be approved by the City of Hodgenville and discharged separately from the building, not to combine prior to any grease control equipment.
2. New multi-unit or strip mall facility owners shall contact the City of Hodgenville prior to

conducting private plumbing work at the multi-unit facility site. Each FSE within a multi­ unit shall have separate private wastewater lines for sanitary and kitchen process wastewater. Each FSE's kitchen process wastewater line shall discharge to its own appropriately sized grease control equipment.

1. The City of Hodgenville will review plans for any new FSE (Class 1-5), or existing FSE (Class 1-5) undergoing significant remodeling, proposing to discharge to Hodgenville's wastewater collection system as part of the building permit acquisition process.
	1. Two (2) sets of the proposed FSE facility plans shall be submitted to the **City of Hodgenville, Attention: Wastewater Superintendent, PO Box 189, Hodgenville,**

## KY42748

* 1. Facility plans shall include at a minimum, the following sheets: floor plan detailing kitchen prep equipment and showing how grease waste lines discharge to the grease control equipment, plumbing sheets, and grease control equipment specification sheets.
	2. Plumbing sheets shall include identification of all cooking and food preparation

equipment (i.e., fryers, grills, woks, produce sinks, etc.}; the number and size(s} of dishwashers, sinks, floor drains and other plumbing fixtures, grease waste bearing plumbing lines, the location of grease control equipment and specifications for grease control equipment.

* 1. The City of Hodgenville will review the plumbing plans and grease control equipment. Hodgenville will approve the plan(s} or recommend changes as it

deems necessary in order to most efficiently prevent the discharge of FOG from the FSE to its wastewater collection system.

* 1. If the plans are approved by the City of Hodgenville, then the FSE will be notified

of its approval.

*f* Contact the appropriate City of Hodgenville personnel at least forty-eight (48) hours prior to installing of the grease control equipment. Hodgenville's personnel **will** inspect the grease control equipment (an FSE's grease control equipment must be inspected prior to installation, or it will not be approved).

*g.* If the installed grease control equipment is approved by the City of Hodgenville, then the FSE **will** be notified of its acceptance.

1. New FSEs and existing FSEs undergoing significant remodeling and having a dishwasher, shall cause to be installed and utilize a pre-rinse sink/station for the cleaning of ware prior to loading in the dishwasher.
2. Single service kitchens with no on-site food preparation (heat and serve only) and which use only disposable service ware (utensils) wishing to be excused from installing and/or maintaining grease control equipment may complete and submit a FOG management exemption form. However, if kitchen practices change in an exempted FSE or an exempted FSE is found to directly cause or contribute to a grease blockage or sanitary sewer overflow in Hodgenville's wastewater collection system then the exemption will be null and void.

***Note:*** *Contact Hodgenville's Wastewater Superintendent and request a FOG management exemption form. The Wastewater Superintendent can be reached by calling 270-358-3832.*

1. In the event that an existing FSE's grease control equipment is deemed to be undersized and/or substandard in design, the FSE's owner will be notified of the deficiencies in writing by the City of Hodgenville. Hodgenville will inform the FSE's owner of the required improvements via the administration of a compliance schedule.
2. The City of Hodgenville's certified waste hauler program:
	1. All grease control equipment waste haulers wishing to transport waste to the City of Hodgenville's wastewater treatment plant shall:
		1. Obtain and maintain a certified waste hauler permit with the City of Hodgenville.
		2. Agree to be forthright with information regarding FOG removed at FSEs in the format required by the City of Hodgenville, whenever required by the City of Hodgenville.
		3. Agree to completely evacuate all FOG from the grease control equipment when servicing such equipment at FSEs (unless prior approval is granted by the City of Hodgenville).
		4. Agree to provide extra tanker(s) so that an FSE's grease control equipment is fully evacuated within a 24-hour period if the volume in the grease control equipment is greater than the tanker(s) capacity.
3. FSEs shall observe and practice Best Management Practices for controlling the discharge of FOG from their facility.
4. Grease interceptor and grease trap cleaning/maintenance requirements:
	1. Cleaning/Pumping- The user, at the user's expense, shall maintain all grease traps and interceptors. Maintenance of “under the sink" grease traps shall include the removal of all fats, oils and greases from the detention compartment of the trap. Removal is usually accomplished by hand-dipping or scooping the collected grease from the trap. Maintenance of grease interceptors shall include the complete removal of all contents, including floating materials, wastewater and bottom sludge or solids. Decanting or discharging removed wastewater back into the grease interceptor from which the waste was removed for the purpose of reducing the volume to be disposed is prohibited.
	2. Cleaning/Pumping frequency- “Under the sink" grease traps must be cleaned no less than once every two (2) weeks. If grease traps are more than 50% full when cleaned, the frequency shall be increased. Greas-9 interceptors shall be pumped out completely a minimum of once every 90 days or more frequently as needed to prevent carryover of grease into the sanitary sewer collection system, unless

it can be demonstrated to the City of Hodgenville that the pumping frequency can be extended past the 90-day period. At no time shall the total accumulation of surface FOG (including floating solids) and settled solids within the grease interceptor constitute more than 25% of the grease interceptor's total liquid depth. Measurement of solids greater than or equal to 25% shall be deemed non-compliant with the City of Hodgenville's FOG management program.

Measurement of solids for compliance shall be conducted by a sludge judge or electronic measuring device.

* 1. Disposal of grease interceptor waste -All waste removed from each grease interceptor must be disposed of at a facility approved to receive such waste. Under no circumstances shall this waste be returned to any private or public portion of the sanitary wastewater collection system.
	2. Additives -Any additive placed into the grease interceptor, grease trap or building discharge line system on a constant, regular, or scheduled basis is prohibited. Such additives shall include but not be limited to, chemicals, acids, caustics, enzymes, commercially available bacteria, emulsifiers, surfactants, or other additive designed to absorb, purge, consume, treat, or otherwise eliminate fats, oils and grease. Written approval may be given by the City of Hodgenville under specific circumstances; however, approved use may be discontinued at any time if it is found downstream of the FSE.
	3. Chemical treatment - Chemical treatments such as drain cleaners, acids and other chemicals designed to dissolve or remove grease shall not be allowed to enter the grease interceptor.
	4. Manifest -All waste pumpage from grease interceptors must be tracked by a manifest. All FSEs having their grease interceptors pumped out shall properly fill out a City of Hodgenville, FOG waste manifest (provided by the City of Hodgenville) which will confirm pumping, hauling, and disposal of waste. The manifest shall be kept with the FSE's FOG-related records for a minimum of three (3) years and made immediately available for inspection by the City of Hodgenville upon request. Any additional manifest(s} required by the hauler or

the disposal site shall be properly submitted in accordance with all applicable federal, state, and/or local laws.

* 1. Maintenance log -A grease control equipment maintenance log, indicating the pumping/cleaning of each grease trap shall be maintained by each FSE for a minimum of three (3) years. This log shall include at a minimum the date, name of person performing the maintenance, the name and signature of the responsible witness, volume removed and disposal method/location. An

example log shall be provided by the City of Hodgenville, but the FSE is not required to use that form.

1S. Prohibitions

1. New FSEs and existing FSEs undergoing significant remodeling shall not allow to have plumbed to grease traps, the following kitchen appliances (unless allowed by the City of Hodgenville): dishwashers.
2. New FSEs and existing FSEs undergoing significant remodeling shall not allow garbage disposal(s) to be plumbed to their kitchen process flow nor to their black water (sanitary flow) (unless otherwise allowed by the City of Hodgenville).
3. FSEs shall not introduce "additives" to their waste stream and/or grease control equipment as a grease management and control mechanism (unless allowed by the City of Hodgenville).
4. Extremely hot liquids (at the discretion of the City of Hodgenville) shall not be introduced to the grease control equipment for the purpose of breaking down FOG.
5. Fryer oil shall not be discharged down any drain.
6. Cleaning of vent hoods and range hoods shall be done in accordance with all applicable federal, state, and local laws. Wastewater from the cleaning of an FSE's vent hoods/range hoods shall not be discharged directly to a sanitary sewer line.
7. FSEs shall remain subject to all prohibitions set forth in applicable sewer use ordinance(s), as well.
8. Waste/wastewater removed from the grease control equipment shall not be discharged to a private or public sewer.
9. Inspection and Monitoring
	1. The City of Hodgenville shall have the right to enter the premises of all FSEs at unannounced (reasonable times) in order to determine whether the FSE is complying with the rules, regulations and requirements set forth in its FOG discharge permit, this policy and all other City of Hodgenville rules and regulations.
	2. The City of Hodgenville shall have the right to observe/inspect FSE's grease control equipment and their contents.
	3. The City of Hodgenville shall have the right to observe/inspect any and all FSE

· records related to, and/or deemed necessary to determine compliance with the FOG program.

* 1. FSEs shall maintain all FOG-related records on-site for a minimum of three (3) years.
1. Violations and Enforcement Action
	1. Violations of an FSE's FOG discharge permit includes, but is not limited to; failure to clean or pump grease control equipment, failure to maintain grease control equipment, including installation of properly functioning effluent Ts and baffles, failure to install grease control equipment, failure to control FOG discharge from the FSE, failure to produce and maintain FOG-related documentation, failure to certify the grease interceptor or grease trap responsible for causing a sewer main obstruction, responsible for causing a sanitary sewer overflow, and use of additives so that FOG is diluted and pushed downstream of the FSE.
	2. When City of Hodgenville personnel determine that a grease interceptor or grease trap is in need of installation, pumping, repairs, maintenance, or replacement, a non-compliance certification or notice of violation (NOV) will be issued stating the nature of the violation(s) and a timeframe for corrective actions.
	3. If the FSE fails to initiate action in response to a non-compliance notification or NOV, a second notice will be issued, and additional fees will be assessed. Fees may include costs associated with service calls for sewer line blockages, line cleaning, camera trucks, line, and pump repairs, including all labor, materials, and equipment. Further non-compliance will result in escalation of enforcement action as determined by the City of Hodgenville's Wastewater Superintendent and can include discontinuance of service.
	4. Immediate discontinuance of service of water/wastewater may be issued if the facility presents an imminent endangerment to the health or welfare of persons or environment, causes blockages, sanitary sewer overflows, or excessive maintenance to the sanitary sewer system, causes significant interference with the wastewater treatment plant, or causes the City of Hodgenville to violate any condition of its Kentucky Pollutant Discharge Elimination System permit. Service shall be reinstated when such conditions have been eliminated and all associated fines have been paid in full.
	5. In addition to any inspection or violation fees, any user who is found to have violated this policy may be assessed an administrative penalty not to exceed one thousand dollars ($1,000) per violation. Each day on which non-compliance shall occur or continue shall be deemed a separate and distinct violation. Such assessment and all other fees may be added to the FSE's next scheduled water/wastewater bill.
	6. If inspections and field investigations determine that any FOG interference or blockage in the sanitary sewer system or wastewater treatment plant is caused by a particular FSE, that FSE shall reimburse the City of Hodgenville for all labor, equipment, materials, and disposal costs incurred by the city to clean the interference or blockage. The charges will be added to the FSE's water/wastewater bill. Failure to reimburse the City of Hodgenville may result in termination of water/wastewater service.
	7. The enforcement action taken by the City of Hodgenville shall be at the discretion of the Wastewater Superintendent.