



Glasgow Water Company

Fats, Oils & Grease (FOG) Management Program

PURPOSE:

The Kentucky Department for Environmental Protection has required the Glasgow Water Company (GWC) to implement a Fats, Oils and Grease (FOG) Program. These guidelines are intended to facilitate and ensure compliance with GWC's FOG Management Program. The accumulation of fats, oils and grease (FOG) within the collection system (sewer lines and pump stations) and the Publicly Owned Treatment Works (POTW) is an increasingly frequent problem for GWC. 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 waters and the environment(s) surrounding them. Aside from the environmental harm inflicted, SSOs can be potentially harmful to humans and animals as the wastewater expelled during an SSO is untreated and may contain dangerous contaminants. Blockages can also lead to sewer back-ups inside homes and businesses connected to the GWC Collection System. SSOs and sewer back-ups are extremely costly to the GWC and its affected customers. The goal of the FOG Management Program is to prevent GWC collection system blockages, obstructions and overflows caused by the contribution and accumulation of FOG from Food Service Establishments (FSEs) and other commercial establishments.

DEFINITIONS:

1. 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 (GCE).
2. Best Management Practices (BMPs): schedules of activities, prohibitions of practices, maintenance procedures and other management practices that reduce the discharge of fats, oils and grease (FOG) to the building sewer, GWC collection system and POTW.
3. Certified Waste Hauler/Plumber: Individuals having received certification from GWC.
4. Fats, Oils & Grease (FOG): Organic polar compounds derived from animal and/or plant sources.
5. 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 an FSE. At the discretion of GWC, FSEs will be classified as follows:

Class 1: Day Care Facilities (NAICS 624410 & 624120), Delis (NAICS 445210), Beverage Bars engaged 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 7222135), Mobile Food Vendors (NAICS 722330), Commercial and Industrial Break Rooms. GWC reserves the right to add or subtract categories from this class as it sees necessary.

Class 2: Limited Service Restaurants/Fast Food Restaurants (NAICS 722211), Caterers (NAICS 722320), Supermarkets/Grocery Stores (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). GWC reserves the right to add or subtract categories from this class as it sees necessary.

Class 3: Full Service Restaurants (NAICS 722110). GWC reserves the right to add or subtract categories from this class as it sees necessary.

Class 4: Buffet and Cafeteria Facilities (NAICS 722212). GWC reserves the right to add or subtract categories from this class as it sees necessary.

Class 5: Institutions: Schools (NAICS 611110), Hospitals (622110), Prisons (NAICS 922140), Nursing Care Facilities (NAICS 623110), etc. GWC reserves the right to add or subtract categories from this class as it sees necessary.

(NOTE: Not all rules and regulations set forth in this FOG Management Program Policy Guide shall be applicable to Existing FSEs)

6. Exemption: A release from the requirement to install grease control equipment (GCE). Exemptions are granted by GWC based on responses to questions on the GWC Exemption Form and/or on-site inspection of the facility requesting exemption.
7. Existing FSE: An FSE having already began service as an FSE prior to the adoption date of the original GWC FOG Management Program.
8. 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).
9. Garbage Disposal: A kitchen appliance designed to grind food particles to a small enough size to dispose to a sink drain.
10. Grease (Brown): Fats, oils and grease discharged to the grease control equipment and/or from kitchen or food prep wastewater.
11. 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.
12. Grease Control Equipment (GCE): Devices engineered and intended to receive wastewater from a FSE's kitchen with the goal of capturing and retaining FOG particles to prevent their release to the collection system. GCE should only receive kitchen wastewater. Devices include grease interceptors, grease traps, or other devices approved by GWC.
13. Grease Interceptor (GI): GCE identified as a large multi-compartment tank, usually 1,000 gallons to 2,000 gallons capacity with the proper inlet and outlet T's, and other necessary components, that provides FOG control for an FSE. No sanitary wastewater (black water) line shall be connected to the grease interceptor. Grease interceptors shall be located outside the FSE, unless otherwise approved by the GWC.
14. Grease Trap (GT): GCE identified as an "under the sink" trap, a small container with baffles or a floor trap. For a FSE approved to install a grease trap, the minimum size requirement is the equivalent of a 25-gallon per minute/50 pound capacity trap. Grease traps shall have flow control restrictor and a vent pipe.
15. Grease Recycle Container: A container used for the storage of yellow grease.
16. Multi-Unit Facility: A single building or facility with multiple separate but adjoining units, each with separate plumbing and possibly other utilities.
17. NAICS: North American Industry Classification System

18. New FSE: An FSE which begins service as an FSE after the adoption date of the original GWC FOG Management Program. (Note: An FSE which has a change in ownership BUT not a change in use is NOT a New FSE.)
19. Series: (i.e. Grease Interceptors Installed in Series): Grease interceptor tanks are installed one after another in a row and are connected by plumbing pipe.
20. Significant Remodeling: Modifications made to an existing FSE sufficient to require issuance of a building, plumbing, or other likewise permit or the temporary closure of the FSE for building renovation or as deemed "significant remodeling" by the GWC.
21. Single Service Kitchen: A FSE that does not prepare food on-site (heat and serve only) and which uses only disposable service ware (utensils and dishes).
22. Tee or T (Influent and Effluent): A T-shaped pipe extending from the ground surface below grade into the grease interceptor to a depth allowing recovery (discharge) of the wastewater layer located under the layer of FOG. Influent and Effluent T's are required to be made of PVC-schedule 40 or equivalent material. Influent T's should extend 2/3 of the grease interceptor water depth from the water surface. Effluent T's should extend to within 12" to 15" of the bottom of the interceptor tank or whatever depth is deemed sufficient to prevent short-circuiting and allow discharge of wastewater below the floating FOG level but above the settled solids level.
23. User: Any person that contributes, causes or permits the contribution or introduction of wastewater or pollutants into the GWC collection system whether intentional or unintentional and whether direct or indirect.
24. Water (Black): Wastewater containing human waste from sanitary fixtures such as toilets and urinals.
25. Water (Gray): Wastewater other than black water as defined in this section.
26. Sanitary Sewer Overflow (SSO): A condition whereby untreated wastewater is released into the environment prior to reaching treatment facilities thereby escaping wastewater treatment.

RESPONSIBILITIES:

1. All potential Existing FSEs which discharge to the GWC collection system will receive a FSE FOG Discharge Permit Application from the GWC.
2. Potential New FSEs applying for sanitary sewer service with the GWC will receive an FSE FOG Discharge Permit Application from the GWC.
3. FSEs which receive a FSE FOG Discharge Permit Application shall complete and return the form to the following address:

Glasgow Water Company
Attn: Collection System Manager
P.O. Box 819
Glasgow, KY 42142

(NOTE: Failure to complete and submit the FSE FOG Discharge Permit Application is a violation of the GWC FOG Management Program and shall make the FSE subject to enforcement actions and/or fines. Those FSEs which feel they should be exempted from all or some portion(s) of the FOG Management Program shall contact the GWC Collection System Manager and request a FOG Management Exemption Form and/or arrange a formal meeting/inspection.)

4. GWC will evaluate all FSE FOG Discharge Permit Applications which it receives. Each FSE will receive a classification and an appropriate FOG Discharge Permit.
5. FSE 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 from the GWC will be required to pay an annual fee of \$25. If the GWC must perform more than one (1) FOG inspection during a Permit-term at any given FSE due to that FSE's failure to comply, then that FSE may be charged an inspection fee of \$25 for each additional inspection after the first inspection. FOG Discharge Permit and inspection fees shall be applied to the FSE's water and sewer service bill during the respective Permit-term.
7. FSEs under the jurisdiction of the GWC shall abide by the rules, regulations and requirements set forth in its FOG Discharge Permit, this FOG Program Policy Guide and the Glasgow City Sewer Use Ordinance.
8. Waste/Wastewater removed from FSE's GCE shall be disposed of in a manner that is in accordance with all applicable federal, state and local laws.
9. FSEs shall work to ensure that measures are in place to prevent FOG discharges from their respective FSE(s) to the GWC collection system in amounts that may contribute to a blockage.
10. FSEs that permanently close for business shall completely evacuate and clean all GIs on the premises and shall fill the GIs with water in order to prevent odors, deterioration and shifting.

REQUIREMENTS:

1. GCE shall be installed and maintained at the expense of the FSE.
2. GCE shall be designed in accordance with the provisions of the GWC FOG Management Program Policy and the following guidelines:
 - A. Final GCE sizing determination will be made by the FSE's engineer, architect or contractor (with GWC's approval) based on criteria such as, but not limited to, flow rate, discharge rate, fixture ratings and wastewater retention time.
 - B. MINIMUM acceptable size of GCE for each FSE classification will be as follows:

Class 1: 25 gallons per minute/50 pound GT
Class 2: 1,000 gallon GI
Class 3: 1,000 gallon GI
Class 4: 1,000 gallon GI
Class 5: 2,000 gallon GI or two 1,000 gallon GI in series

(Note: Sizing Requirements may be altered ONLY with appropriate approval from the GWC.)
 - C. GWC will review GCE sizing information received from the FSE's engineer, architect or contractor. GWC will make a decision regarding approval of the FSE's GCE plans. GWC may require alterations to be made to the FSE's GCE plans prior to approval.

- D. If GCEs are installed in a series, they 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.
3. 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 (GI) located outside the FSE building (unless approval of an alternate location is granted by the GWC). Grease Interceptors shall be constructed of durable materials able to withstand abrupt and extreme changes in temperature as well any anticipated load that may be placed upon the GI. GIs shall be water and gas tight. GIs shall have access provided by at least one (1) manhole over each GI division (influent and effluent chambers) to allow for inspection and maintenance of the GI and its internal pipes and fittings.
 4. New FSEs (class 1), as well as existing facilities (class 1) undergoing significant remodeling, shall install and maintain, at a minimum, a GT whose size is rated at 25 gallons per minute/50 pounds capacity.
 5. New construction of FSEs shall have separate sanitary (restroom) and kitchen process lines. Appropriate kitchen process lines shall be plumbed to appropriately sized GCE. Kitchen process lines and sanitary lines shall not combine prior to the discharge of the GCE.
 6. 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 GWC and discharged separately from the building, not to combine prior to a GCE discharge.
 7. New multi-unit facility, or "strip mall" facility, owners shall contact the GWC prior to conducting private plumbing work at the multi-unit facility site. Each FSE within a multi-unit facility 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 GCE.
 8. GWC will review plans for any new FSE (class 1-5), or existing FSE (class 1-5) undergoing significant remodeling, proposing to discharge to the GWC Collections System.

A. The proposed FSE facility plans shall be submitted to:

Glasgow Water Company
Attn: Collection System Manager
P.O. Box 819
Glasgow, KY 42142

(Note: Electronic copies of such plans may be acceptable so long as the plans are legible and complete.)

- B. Facility plans shall include, at a minimum, the following: floor plan detailing kitchen equipment and showing how kitchen gray water waste lines will discharge to GCE, plumbing sheets and GCE specifications sheet(s).
- C. 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; size and location of kitchen gray water waste lines, the location of GCE and specifications for GCE.
- D. GWC will review the plumbing plans and GCE sizing. GWC 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 collections system.

- E. If the plans are approved by the GWC then the FSE will be notified of its approval.
- F. The GWC shall be contacted upon installation of the FSE's underground waste plumbing and GCE with ample time for the GWC (or an authorized representative of such) to inspect the waste plumbing and GCE prior to covering and/or backfilling such equipment and appurtenances.

(Note: Inspection of underground waste plumbing by the GWC is intended to ensure that ONLY those appropriate gray water waste lines are plumbed to discharge wastewater the GCE.)

(Note: If the FSE fails to contact the GWC OR if underground waste plumbing and/or GCE is covered and/or backfilled prior to approval from the GWC, then the FSE may be required to uncover those installments which the GWC wishes to inspect.)

- G. The GWC shall be contacted upon installation of all the FSE's kitchen appliances (i.e. dishwashers, sinks, drains, etc.) and an inspection shall be conducted to ensure all appropriate appliances and drains are plumbed to discharge wastewater to the GCE. Such an inspection shall be conducted, and approval shall be granted from the GWC prior to operation of the FSE.
9. New FSEs and Existing FSEs undergoing significant remodeling, 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.
 10. Single service kitchens with no onsite food preparation (heat and serve only) and which use only disposable service ware (utensils) wishing to be excused from installing and/or maintaining GCE, may complete and submit a FOG Management Exemption Form. However, if kitchen practices change in an exempted FSE or FOG-laden wastewater from an exempted FSE is found to cause or contribute to abnormal conditions in the GWC's collections system then the exemption will be null and void.
 11. In the event an existing FSE's GCE is deemed by the GWC to be undersized, substandard in design, ineffective and/or failing, then the FSE owner will be notified of the deficiencies in writing by the GWC. GWC will inform the FSE owner of the required improvements via the administration of a compliance schedule.
 12. FSEs shall observe and utilize Best Management Practices (BMPs) for controlling the discharge of FOG from their facility.
 13. Grease Interceptor (GI) and Grease Trap (GT) Cleaning/Maintenance Requirements
 - A. Service (Cleaning/Pumping): The user at the user's expense shall maintain all grease traps and grease interceptors. Maintenance of 'under the sink' grease traps shall include the removal of all fats, oils, and grease from the detention compartment of the trap. Maintenance of grease interceptors shall include the complete removal of all contents, including floating materials, wastewater and bottom sludges 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. If a FSE utilizes a contractor to service its GCE, it is the responsibility of the FSE to ensure the contractor is appropriately certified to perform to such service if certification is required.
 - B. Service Frequency: "Under the sink" grease traps must be cleaned no less than once every two weeks. If grease traps are more than 50% full when cleaned, the frequency shall be increased. Grease interceptors shall be pumped out completely a minimum of once every 90 days or more frequently as needed to prevent carry-over of FOG-laden wastewater into the sanitary sewer collection system, unless it can be demonstrated to the GWC 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 GI constitute more than 25% of the GI's total liquid depth (i.e. hydraulic capacity). Solids' concentrations greater than 25% shall be deemed non-compliant with the GWC's FOG Management Program. Measurement of solids' concentration for compliance shall be conducted by a

capable of extracting a sample of the entire GCE's water column (hydraulic capacity top to bottom) to allow visualization and measurement of the GCE's contents (i.e. "sludge-judge", "core-taker", etc.).

- C. 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 the contents removed from GCE be returned to any private or public portion of the sanitary sewer collection system. GCE waste brought to the Glasgow Wastewater Treatment Plant for disposal shall be done so by a GWC Certified Waste Hauler having an effective GWC Waste Hauler Discharge Permit and meeting all GWC Certified Waste Hauler Program Requirements.
- D. Additives: Any additive(s) placed into the grease interceptor, grease trap, or building discharge line system at 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. Approval may be granted by the GWC under specific circumstances; however, approved use shall be discontinued at any time if deemed necessary by the GWC.
- E. 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 GCE.
- F. Records: FSEs shall ensure that appropriate records are maintained each time its Grease Interceptor(s) is serviced (pumped/cleaned). Records may include, but are not limited to, receipts and/or manifests. Such records shall be maintained for a minimum of 3 years.
- G. Maintenance Log: A GCE Maintenance Log indicating each 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, volume removed and disposal method/location. An example log may be provided by GWC but the FSE is not required to use that form. The log(s) shall be made immediately available for inspection to the GWC representative upon request.

14. Prohibitions

- A. New FSEs and Existing FSEs undergoing significant remodeling shall not allow to have plumbed to a Grease Trap the following kitchen appliances (unless otherwise allowed by the GWC): dishwashers.
- B. New FSEs and Existing FSEs undergoing significant remodeling shall not allow garbage disposal(s) to be plumbed to their kitchen gray water waste lines nor to their black water (sanitary flow) lines (unless otherwise allowed by the GWC).

(Note: FSEs having the discharge from garbage disposal(s) plumbed to its GCE may be required to ensure service of its GCE is completed more often than the minimum 90-day frequency.)

- C. FSEs shall not introduce "additives" to their waste stream and/or GCE as a grease management and control mechanism (unless otherwise allowed by the GWC).
- D. Extremely hot liquids (at the discretion of the GWC) intended to dissolve FOG-particles shall not be introduced to GCE.

- E. Fryer oil and/or yellow grease shall not be discharged to any drain.
- F. 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.
- G. FSEs shall remain subject to all prohibitions set forth in the Glasgow City Sewer Use Ordinance.
- H. Waste/Wastewater removed from GCE shall not be discharged to a private or public sewer.

15. Inspection and Monitoring

- A. GWC shall have the right to enter the premises of all FSEs unannounced (at reasonable times) 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 GWC Rules and Regulations.
- B. GWC shall have the right to observe/inspect FSE's GCE and their contents.
- C. GWC shall have the right to observe/inspect any and all FSE records related to, and/or deemed necessary to determine compliance with, the GWC FOG Management Program.
- D. FSEs shall maintain all FOG-related records on-site for a minimum of three (3) years.
- E. GWC shall have the right to perform trace-dye testing at a FSE for the purpose of determining the destination of wastewater discharge from any appliances, drains, etc. at the FSE. Such testing shall be arranged in advance with the FSE.

16. Violations and Enforcement Action

- A. 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 T's and baffles, failure to install grease control equipment, failure to control FOG discharge from the FSE, failure to produce and maintain required FOG-related documentation, failure to ensure certification of grease interceptor or trap, responsibility for a sewer main obstruction, and/or a sanitary sewer overflow, use of additives such that FOG is diluted and carried downstream of the FSE.
- B. When GWC personnel determine that a grease interceptor or trap is in need of installation, pumping, repairs, maintenance, or replacement, a non-compliance notification or notice of violation (NOV) will be issued stating the nature of the violation(s) and timeframe for corrective action(s).
- C. If the FSE fails to initiate action in response to a non-compliance notification or NOV, a second notice shall be issued and additional fees may 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 GWC General Manager and can include discontinuance of service.
- D. Immediate discontinuance of service of water and/or wastewater service may be administered if the facility presents an imminent endangerment to the health or welfare of persons or the 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 GWC to violate any

condition of its KPDES permit. Service shall be reinstated when such conditions have been eliminated and all associated fines have been paid in full.

- E. 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.

- F. 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 GWC for all labor, equipment, materials, and disposal costs incurred by the GWC to remediate the interference or blockage. The charges may be added to the FSE's water/wastewater bill. Failure to reimburse the GWC may result in termination of water and/or wastewater service.

- G. The enforcement action taken by the GWC shall be at the discretion of the GWC General Manager and in accordance with the Glasgow City Sewer Use Ordinance.

(Adopted: October 11, 2012; Amended: December 14, 2017)