

CITY OF RICHMOND HILL

**FATS, OILS AND GREASE TRAP “FOG”
STANDARD**



2-9-2022

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Attachments:

1. **Wastewater Discharge Permit Application** - *Detach and Submit Completed Form with Your Building Permit*
 2. Grease Interceptor Maintenance Record - Example
 3. Liquid Wastewater Manifest - Example
 4. FOG Inspection - Example
 5. Grease Trap Detail GT-1
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**CITY OF RICHMOND HILL
FOG PROGRAM**

A. Purpose

The intent of this Grease Trap Standard is to aid in the prevention of sanitary sewer blockages and obstructions from contributions and accumulation of fats, oils, and greases into said sewer system from commercial establishments, particularly food preparation and serving facilities. It should be noted that failure to comply with this Standard shall be considered violation of the City Sewer Use Ordinance, subject to applicable penalties and /or denial or discontinuance of water and/or sewer services.

B. Administration

Except as otherwise provided herein; The City of Richmond Hill Planning, Zoning, and Building Department shall administer, or other duly authorized representatives, or agents to implement and enforce the provisions of this ordinance.

C. Definitions

All terms used in this Ordinance shall be interpreted in accordance with the definitions and abbreviations as set forth in this Section, or in any other Section of this Ordinance:

1. **“Public Work Department ”** the person designated by the City of Richmond Hill to supervise the operation of the WWTP or his duly authorized representative or agent, and who is charged with certain duties and responsibilities of this ordinance
2. **“CITY”** City of Richmond Hill, Georgia.
3. **“Best Management Practices (BMP’s)”** Schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. Best Management practices include procedures and practices that reduce the discharge of fats, Oils and Grease (FOG) to the building drain and ultimately to City's WWTP.
4. **“Change in Operations”** Any change in the ownership, food types, or operational procedures that have the potential to increase the amount of FOG generated and/or discharged by Food Service Establishments in an amount that alone or collectively causes or creates a potential for sanitary sewer overflow(SSO) to occur.
5. **“Collection Line or Sanitary Sewer Line”** that portion of the conveyance, which collects and transmits wastewater from the Users to the WWTP, excluding building service lines.
6. **“Commercial Establishments”** Food Service Establishments or Institutions that produce commercial and domestic wastewaters.
7. **“Commercial Wastes”:**
 - Non-toxic, non-hazardous liquid wastewater from commercial establishments; or
 - Grease interceptor contents generated by a commercial food operation or institutional food preparation facility, including

- without limitation, fats, grease, and food scraps; or
 - Any oil waste residue produced from vehicle maintenance or washing that discharge to an oil- water separator or sand trap.
- 8. **"Commercial Waste Transporter Permit"** is a permit issued by the Georgia FOG Alliance for an individual tank truck or company.
- 9. **"Control Authority"**: The City's Public Work Inspection Department or his duly authorized representative or agent
- 10. **"Cooking Establishments"**: Those establishments primarily engaged in activities of preparing, serving, or otherwise making available for consumption foodstuffs and that use one or more of the following preparation activities: cooking by frying (all methods), baking (all methods), grilling, sautéing, rotisserie cooking, broiling (all methods), boiling, blanching, roasting, toasting, or poaching. Also included are infrared heating, searing, barbecuing, and any other food preparation activity that produces a hot, non-drinkable food product in or on a receptacle that requires washing.
- 11. **" Domestic Wastes or Wastewater:** (a) Wastewater from normal residential activities including but not limited to Wastewater from kitchen, bath and Laundry facilities; (b) Wastewater from personal sanitary conveniences (toilets, showers, bathtubs, fountains, non-commercial sinks and similar structures) of commercial, industrial and institutional buildings, provided that the wastewater exhibits characteristics that are similar to those of Wastewater from normal residential activities; And (c) specifically excluded is wastewater from commercial, industrial or institutional laundries or food preparation facilities.
- 12. **"Existing Food Service Establishments"**: Any Food service Establishment, which is not a New Food Service Establishment.
- 13. **"EPD"**: The State of Georgia, Environmental Protection Division of the Department of Natural Resources.
- 14. **"Fats, Oils, and Greases (FOG)"** A semi-solid, viscous liquid organic polar compound derived from animal and/or plant sources that contain multiple carbon chain triglyceride molecules. These substances are detectable and measurable using analytical test procedures established in 40 CFR 136, as may be amended from time to time. All are sometimes referred to herein as "Grease" or "Greases".
- 15. **"Food Service Establishments:"** (FSE) A commercial facility engaged in preparing and /or serving food for consumption by the public, including but not limited to a restaurant, café, cafeteria, snack bar, grill, deli, catering service, bakery, grocery store, butcher shop, hotel, school, hospital, prison, correctional facility and care institution or similar establishment that discharges wastewater to the City of Richmond Hill WWTP System.
- 16. **"FOG"** fats, oils, and grease.
- 17. **"FOG Separator"** means a structure or device designed to collect and retain oils, grease, and fatty substances usually found in kitchen or similar wastes.

18. **"Grease Waste Trap or Interceptor"** A device for separating and retaining waterborne Greases and Grease complexes prior to the wastewater exiting the trap and entering the City's sewer system. These devices also serve to collect settle able solids, generated by and from food preparation activities, prior to the water exiting the trap and entering the sewer system. Grease Traps and Interceptors are sometimes referred to herein as "Grease Waste Interceptors".
19. **"Grease Waste Interceptor"**: A tank that serves one or more fixtures and is remotely located. Such Grease Waste Interceptors include, but are not limited to tanks that capture wastewater from dishwashers, floor drains, pot and pan sinks and trenches. A Grease Waste Interceptor is an outside, underground, multi-compartment tank that reduces the amount of FOG in wastewater prior to discharging to the City's sewer system.
20. **"Grease Waste Trap"** A device designed to retain grease from one to a maximum of four fixtures. A Grease Trap is not appropriate for use on heated water (e.g. dishwasher) or in-line to a waste disposal unit (e.g. garbage disposal and grinders). A Grease Trap is a small, indoor device. The size of which can be no less than Fifty (50) pounds grease retention with a flow rate of Twenty-five (25) gallons per minute...
21. **"Hazardous Waste"** Any solid or liquid waste that has been defined as a hazardous waste in regulation promulgated by the State of Georgia or the US EPA.
22. **Manifest** that receipt which is retained by the generator of wastes for disposing recyclable wastes or liquid wastes as required by the State of Georgia EPD.
23. **"mg/l"** milligrams per liter.
24. **"New Food Service Establishment"** Any food service establishment for which (A) a contact for construction or significant reconstruction has not been entered into prior to the effective Date of this Ordinance; or (B) for which a property owner remodels a pre-existing building for a food service establishment tenant and construction has not commenced prior to effective Date of this Ordinance. Generally, significant reconstruction will be presumed to have taken place where the capital cost of the new construction exceeds \$10,000.
25. **"Minimum Design Capability"** The design features of a Grease Waste Interceptor that insures its ability to effectively intercept and retain Greases from grease-laden wastewaters discharged to the City's sewer system. Grease interceptors shall be designed and installed per manufacturers instructions and requirements of the current adopted IPC and approved by the building official.
26. **"Non-Cooking Establishments"** Those establishments primarily engaged in the preparation of precooked foodstuffs that do not practice any form of cooking. These include cold dairy and frozen foodstuffs preparation and serving establishments.
- ~~27. **"Oil water separator"** a structure or device designed primarily to collect and retain oily substances.~~

28. **“Originator”** the owner or operator of the grease or FOG interceptor, grit trap, oil-water separator, or sand trap from which commercial wastes are removed.
29. **“Permittee”** A person who has received a permit to discharge wastewater into the City's sewer facilities subject to the requirements and conditions established by the City.
30. **“Registration”** acceptance by the Georgia EPD of a transporter.
31. **“Registered Commercial Waste Transporter”** is a business/owner registered by the State of Georgia, Environmental Protection Division and whose tank trucks are permitted by the Georgia EPD.
32. **“Remodeling”** A physical change or operational change causing generation of an amount of FOG that exceeds the current amount of FOG discharged to the sewer system by the Food Service Establishment in an amount that alone or collectively causes or creates a potential for SSOs to occur; or exceeding a cost of \$10,000 to a Food Service Establishment that requires a building permit, and involves any one or combination of the following:
- Under slab plumbing in the food processing area,
 - A 30% increase in the net public seating area,
 - A 30% increase in the size of the kitchen area, or
 - Any change in the size or type of food preparation equipment.
33. **“Sample Point”** A location approved by the City, from which wastewater can be collected that is representative in content and consistency of the entire flow of wastewater being sampled.
34. **“Sampling Facilities Structure(s)”** provided at the user's expense for the City or user to measure and record wastewater constituent mass, concentrations, collect a representative sample, or provide access to plug or terminate the discharge.
35. **“Sanitary Sewer Overflow (“SSO”)**” The unauthorized discharge of wastewater from the City's designated sewer collection and conveyance facilities.
36. **“Sand or Grit Trap”** a receptacle designed for the accumulation and removal of sand, grit, rocks and other similar debris.
37. **“Septic Wastes”** the residual material removed from a septic tank.
38. **“Transporter”** any person or firm, which owns or operates one or more waste tank trucks that receive or dispose of commercial waste in this state. Must have a Permit issued by Georgia EPD as a Grease Waste Hauler.
39. **“Tank truck”** any vehicle that removes and transports commercial wastes. Must have a Permit issued by Georgia EPD as a Grease Waste Hauler.
40. **“Twenty-five percent (25%) Rule” Requirement** for grease interceptors to be maintained such that the combined FOG and solids accumulation does not exceed 25% of the design hydraulic depth of the grease interceptor. This is to

ensure that the minimum hydraulic retention time and required available hydraulic volume is maintained to effectively intercept and retain FOG discharged to the sewer system.

41. **“User”**: Any person, including those located outside the jurisdictional limits of the City Limits within the Bryan County, who contributes causes or permits the contribution or discharge of wastewater into the City's sewer system, including persons who contribute such wastewater from mobile sources, such as those who discharge hauled septic tank waste or grease waste.
42. **“Waste hauler”** Any person licensed to carry on or engage in vehicular transport of waste as part of, or incidental to, any business for that purpose.
43. **“Waste Minimization Practices”** Plans or programs intended to reduce or eliminate discharges to the sewer system or to conserve water, including, but not limited to, product substitutions, housekeeping practices, inventory control, employee education, and other steps as necessary to minimize wastewater produced.
44. **“Wastewater”** The liquid and water-carried Commercial, Industrial or Domestic Wastes and Pollutants from dwellings, commercial buildings, industrial facilities and institutions, including hauled liquid waste, groundwater, surface water and storm water that may be present, whether treated or untreated.
45. **“Wastewater Treatment Plant”** a treatment works facility, which is owned by City of Richmond Hill. This definition includes any devices or systems used in the collection, storage, treatment, recycling and reclamation of sewage, industrial or commercial wastes of liquid nature and any conveyances which convey wastewater to a treatment plant.

D. GENERAL REQUIRMENTS, LIMITATIONS, AND PROHIBITIONS (“FOG”) DISCHARGES

1.1 FOG DISCHARGE REQUIREMENT

No Food Service Establishment shall discharge or cause to be discharged into the sewer system FOG that exceeds a concentration level adopted by the City or that may accumulate and/or cause or contribute to blockages in the sewer system or at the sewer system lateral which connects the Food Service Establishment to the sewer system.

1.2 PROHIBITIONS

The following prohibitions shall apply to all Food Service Establishments:

- A. Introduction of any additives into a Food Service Establishment's wastewater system for the purpose of emulsifying FOG or biologically/chemically treating FOG for grease remediation or as a supplement to interceptor maintenance, unless a specific written authorization from the City is obtained.
- B. Disposal of waste cooking oil into drainage pipes is prohibited. All waste cooking oils shall be collected and stored properly in receptacles such as barrels or drums for recycling or other acceptable methods of disposal.

- C. Discharge of wastewater with temperatures in excess of 140°F to any grease control device, including grease traps and grease interceptors, is prohibited.
- D. Discharge of wastes from toilets, urinals, wash basins, and other fixtures containing fecal materials to sewer lines intended for grease interceptor service, or vice versa, is prohibited.
- E. Discharge of any waste including FOG and solid materials removed from the grease control device to the sewer system is prohibited. Grease removed from grease interceptors shall be waste hauled periodically as part of the operation and maintenance requirements for grease interceptors.
- F. Operation of grease interceptors with FOG and solids accumulation exceeding 25% of the total operating depth of the grease interceptor (25% Rule)
- G. Discharge of any waste including FOG and solid materials removed from floor mats and/or kitchen appliances directly to the sewer system is prohibited.

1.3 FOG WASTEWATER DISCHARGE PERMIT REQUIRED

No person shall discharge, or cause to be discharged any wastewater from Food Service Establishments directly or indirectly into the sewer system without first obtaining a FOG Wastewater Discharge Permit pursuant to these Regulations.

1.4 KITCHEN BEST MANAGEMENT PRACTICES REQUIRED

All Food Services Establishments shall implement Kitchen Best Management Practices in its operation to minimize the discharge of FOG to the sewer system. Detailed requirements for Kitchen Best Management Practices shall be specified in the permit. This may include kitchen practices and employee training that is essential in minimizing FOG discharge.

1.5 FOG PRETREATMENT REQUIRMENT

Food Service Establishments are required to install, operate and maintain an approved type and adequately sized grease interceptor necessary to maintain compliance with the objectives of these Regulations. The grease interceptor shall be adequate to separate and remove FOG contained in wastewater discharges from Food Service Establishments prior to discharge to the sewer system. Fixtures, equipment, and drain lines located in the food preparation and clean up areas of Food Service Establishments that are sources of FOG discharges shall be connected to the grease interceptor. Compliance shall be established as follows:

A. New Construction of Food Service Establishments

New construction of Food Service Establishments, including remodels or tenant improvements that change the classification of an establishment to a Food Service Establishment, shall include and install grease interceptors prior to commencing discharges of wastewater to the sewer system.

B. Existing Food Service Establishments

1. Existing Food Service Establishments, which have caused or contributed to a grease-related blockage in the sewer system, or which have been determined to contribute significant FOG to the sewer system by the Public Work Director of Wastewater based on inspection or sampling, shall be deemed to have reasonable potential to adversely impact the sewer system, and shall install grease interceptors within 180 days upon notification by the City.
2. Existing Food Service Establishments or Food Service Establishments that change ownership, that undergo remodeling or a change in operations as defined in of the definitions section of these regulations, shall be required to install a grease interceptor.

1.6 COMMERCIAL PROPERTIES

Property owners of commercial properties containing multiple tenants on a single parcel, or their official designee(s), shall be responsible for the installation and maintenance of the grease interceptor serving multiple or individual Tenants. Property owners of commercial properties shall be responsible for all aspects of compliance with these Regulations.

Permits issued to FSEs that do not have an individual water meter shall also be issued to the property owner and property Management Company as co-permittees. Any subsequent enforcement actions that may be necessary to ensure compliance with these Regulations will be prosecuted jointly against the FSE and the property owner.

1.7 GREASE WASTE INTERCEPTOR INSTALLATION

Design

1. Grease waste interceptor location and sizing shall be based on the formula used by the EPA-2 Model, subject to approval by the City.
 - a. **Sizing Criteria.** When determining the minimum size of a Grease Waste Interceptor the following shall be considered:

The minimum acceptable volume of a grease waste interceptor shall not be less than seven hundred and fifty (750) gallons (with dishwasher 1000 gallons). The maximum individual size shall be Twenty-five Hundred (2500) gallons, a series of grease waste interceptors may be necessary for larger grease waste interceptors capacities greater than Twenty-Five Hundred (2500) gallons.

EPA-2 Model Formula for Calculation of Grease Waste Interceptor

$$(A/B) \times C = D \quad D \times 60 \text{ minutes} = E \quad E \times 2 \text{ hours detention} = \text{Volume}$$

A= Maximum drainage flow in gallon per minute from fixtures see Table 1

B= Total drainage flow divided by number of fixtures

C= Loading Factors

Restaurant Type

Fast Food–paper delivery = 0.50

Low Volume = 0.50

Medium Volume = 0.75

High Volume = 1.0

D= B X C= Subtotal (D)

E= Total (D) X 60 minutes = maximum flow for one hour

F = (E) X 2 hours Detention time = volume of grease waste interceptor

RECOMMENDED RATINGS FOR COMMERCIAL GREASE WASTE INTEREPTORS

TYPE OF FIXTURE	FLOW RATE IN GALLONS PER MINUTE
Restaurant kitchen sink/wok oven	15
Floor Drain/Mop Sink	10
Single–Compartment scullery sink	20
Double–Compartment scullery sink	35
2 Single compartment sinks	25
2 Double compartment sinks	35
Triple sink unit with 1 ½" drain	35
Triple sink unit with 2" drain	35
DISHWASHERS FOR RESTAURANTS	
Up to 30 gallon water capacity	15
Up to 50 gallon water capacity	25
50 to 100 gallon water capacity	40

Table 1

EXAMPLE

GREASE WASTE INTERCEPTOR SIZING FORMULA BASED ON EPA-2 MODEL

A. Determine Maximum drainage flow from fixtures:

Type of Fixture	Flow Rate	Amount	Example
Floor Drain/mop sink	10 gpm	1	1 X 10 = 10
Restaurant Kitchen Sink/Wok Oven	15 gpm	1	1 X 15 = 15
Single Compartment Sink	15 gpm	1	1 X 15 = 15
Double Compartment Sink	20 gpm		
2, Single Compartment Sinks	25 gpm		
2, Double Compartment Sinks	25 gpm		
Triple Sink 1 ½" Drain	35 gpm	1	1 X 35 = 35
Triple Sink 2" Drain	35 gpm		
Up to 30 gallon dishwasher	15 gpm		
30 gal to 50 gallon dishwasher	25 gpm	1	1 X 25 = 25
50–100 gallon dishwasher	40 gpm		
B. Total – Divided by number of Fixture per Kitchen		85/ 5 = gpm (per kitchen)	85/5 = 17

Table 2

C. Loading Factors

Restaurant Type	Fast Food–paper delivery	=	.50
	Low Volume	=	.50
	Medium Volume	=	.75
	High Volume	=	1.0

D. B X C = Sub Total (D) Low Volume 0.5 X 17 = 8.5 gpm

E. Total (D) X 60 Min. = max. Flow for 1 hour 8.5 X 60 min. = 510 gph

F. (E) x 2 hours Detention time = volume of Grease Waste Interceptor in gallons

$$510 \text{ gph} \times 2 \text{ hrs.} = 1020 \text{ gallons}$$

- b.** Existing food service facilities that do not have a grease waste interceptor and the city determines that they are causing a problem with grease will be required to install properly sized interceptor(s) in accordance with the City of Richmond Hill's Design Details and the plumbing provisions of the State of Georgia Plumbing Code. Plumbing

connections shall be modified to accommodate the grease waste interceptor.

- c. Existing food service facilities that have a grease waste interceptor and the city determines that they are causing a problem with grease will be required to upgrade or replace the existing grease waste interceptor in accordance with the City of Richmond Hill's Design Details. This shall be done within a Schedule approved by the City.
- d. Food service establishments whose operations cause or allow excessive fats, oils, and grease to discharge or accumulate in the sanitary sewer collection system shall be liable to the City of Richmond Hill for all costs related to department service calls for line blockages, line cleanings, line and pump repairs, etc., including all labor, materials, equipment, and overhead costs. Failure to pay all service-related charges shall be grounds for discontinuance of water and/or sewer service.

2. New food service facilities. All new grease waste interceptors installed at food service facilities shall be of the type and capacity required by the City.

3. Grease Waste Interceptors shall be installed by Users as required by the City. Grease Waste Interceptors shall be installed at the User's expense, when such User operates a Cooking Establishment. Grease Waste Interceptors may also be required in non-cooking or cold dairy and frozen foodstuffs establishments and other institutions or commercial establishments when they are deemed necessary by the City for the proper handling of liquid wastes containing Grease. No User shall allow wastewater discharge concentration from subject Grease Waste Interceptor to exceed 100 milligrams per liter. All Grease Waste Interceptors shall be of a type, design, and capacity approved by The City and shall be readily and easily accessible for User cleaning and City inspection. All such Grease Waste Interceptors shall be serviced and emptied of accumulated waste content as required in order to maintain Minimum Design Capability or effective Volume of the Grease Waste Interceptor, but not less often than every ninety (90) days. Users who are required to pass water through a Grease Waste Interceptor shall:

- a. Provide for a minimum hydraulic retention time of sixty (60) minutes at actual peak flow or one hundred and twenty (120) minutes at the calculated theoretical peak flow rate as predicted by the [EPA Model 2](#) fixture criteria, between the influent and effluent baffles.
- b. Wastewaters from food waste grinders or garbage disposal units should not be discharged to grease waste traps or interceptors, as the high solids loadings can upset grease waste trap's or interceptor's performance and greatly increase both solids accumulations and the need for frequent pump-out.

- c. Dishwasher water or hot water heater Temperatures cannot exceed 140o F (60o C) per the state of Georgia Plumbing Code Section 803.1.
- d. Remove any accumulated Grease cap and sludge pocket as required, but at intervals of no longer than ninety (90) days at the Users expense. Grease Waste Interceptors shall be kept free of inorganic solid materials such as grit, rocks, gravel, sand, eating utensils, cigarettes, shells, towels, rags, etc., which could settle into the Sludge pocket and thereby reduce the effective volume of the Grease Waste Interceptor.
- e. No skimmed or pumped wastes or other materials removed from Grease Waste Interceptor can be treated in any fashion onsite and reintroduced back into the Grease Waste Interceptor. The User shall be responsible for the attainment of established Grease numerical limit of 100 mg/l on all Discharges of wastewater from said Grease Waste Interceptor into the City sewer system.
- f. Operate the Grease Waste Interceptor in a manner so as to maintain said device such that attainment of the grease limit is consistently achieved. "Consistent" shall mean any wastewater sample taken from said Grease Waste Interceptor discharge shall be subject to terms of numerical limit attainment as stated in **4e**. If an establishment desires, because of documented space constraints, approval of an alternate to an out-of-building Grease Waste Interceptor may be requested. The request for an alternative location shall contain the following information:
 - (1).** Location of City sewer main and easement in relation to available exterior space outside building. Document space is not available between building and sewer line
 - (2).** Show Existing plumbing at or in a site that uses common plumbing for all services at that site.
- g. Obtain written approval from the City prior to the use of biological additives as a Grease degradation agent. Any establishment using this method of grease abatement shall maintain the trap or interceptor in such a manner that attainment of the grease discharge limit, as measured from the trap's outlet, is consistently achieved.
- h. Obtain written approval from the City prior to the use of automatic Grease removal systems. Any establishment using this equipment shall operate the system in such a manner that attainment of the Grease wastewater discharge limit, as measured from the unit's outlet, is consistently achieved.
- i. Provide access manholes, with a minimum diameter of 24 inches,

over each chamber and sanitary tee. The access manholes shall extend at least to finished grade and be designed and maintained to prevent water inflow or infiltration. The manholes shall also have readily removable covers to facilitate inspection, Grease removal, and wastewater sampling activities.

- j. Not allowed: Non-grease or restroom laden sources will not be connected to sewer lines intended for Grease Waste Interceptor service.

1.8 FOG WASTEWATER DISCHARGE PERMITS FOR FOOD SERVICE ESTABLISHMENTS

1. FOG WASTEWATER DISCHARGE PERMIT REQUIRED

- A. Food Service Establishments proposing to discharge or currently discharging wastewater into the City's sewer system shall obtain a FOG Wastewater Discharge Permit from the Planning, Zoning, and Building Department.
- B. FOG Wastewater Discharge Permits shall be expressly subject to all provisions of these Regulations and all other regulations, charges for use, and fees established by the City. The conditions of FOG Wastewater Discharge Permits shall be enforced by the City in accordance with these Regulations and applicable State and Federal Regulations.

2. FOG WASTEWATER DISCHARGE PERMIT APPLICATION

- A. Any FSE required to obtain a FOG Wastewater Discharge Permit shall complete and file with the City prior to commencing or continuing discharges, an application in a form prescribed by the City Planning, Zoning, and Building Department. The applicable fees shall accompany this application. The applicant shall submit, in units and terms appropriate for evaluation, the following information at a minimum:
 - 1. Name, address, telephone number, assessor's parcel number(s), description of the Food Service Establishment, operation, cuisine, service activities, or clients using the applicant's services.
 - 2. (Whichever is applicable) Name, address and telephone number of any and all principals/owners/major shareholders of the Food Service Establishment; Articles of Incorporation; most recent Report of the Secretary of State; Business License.
 - 3. Name, address and telephone number of property

owner or leaser and the property manager where the Food Service Establishment is located.

4. Any other information as specified in the application form.
- B. Applicants may be required to submit site plans, floor plans, mechanical and plumbing plans, and details to show all sewers, FOG control devices, grease interceptor or other pretreatment equipment and appurtenances by size, location, and elevation for evaluation.
- C. Other information related to the applicant's business operations and potential discharge may be requested to properly evaluate the permit application.
- D. After evaluation of the data furnished, the City may issue a FOG Wastewater Discharge Permit, subject to terms and conditions set forth in these Regulations and as otherwise determined by the Planning, Zoning, and Building Director.

3. FOG WASTEWATER DISCHARGE PERMIT CONDITIONS

The issuance of a FOG Wastewater Discharge Permit may contain any of the following conditions or limits:

- A. Limits on discharge of FOG and other priority pollutants.
- B. Requirements for proper operation and maintenance of grease interceptors and other grease control devices.
- C. Grease interceptor maintenance frequency and schedule.
- D. Requirements for implementation of Kitchen Best Management Practices and installation of adequate grease interceptor and/or grease control device.
- E. Requirements for maintaining and reporting status of Kitchen Best Management Practices
- F. Requirements for maintaining and submitting logs and records, including waste hauling records and waste manifests.
- G. Requirements to self-monitor.
- H. Requirements for the Food Service Establishment to construct, operate and maintain, at its own expense, FOG control device and sampling facilities.
- I. Additional requirements as otherwise determined to be reasonably appropriate by the Planning, Zoning, and Building Director to protect the City's sewer system.

- J. Other terms and conditions, which may be reasonably applicable to ensure compliance with these Regulations.

4. FOG WASTEWATER DISCHARGE PERMIT FEE

A FOG Wastewater Discharge Permit Fee of **\$50.00** may be assessed. The FOG Wastewater Discharge Permit fee shall be paid by the applicant. Payment of the permit fee must be received by the City prior to issuance of the permit.

5. NON-TRANSFERABILITY OF PERMITS

FOG Wastewater Discharge Permits issued under these Regulations are for a Specific Food Service Establishment, for a specific operation and create no vested rights.

- A. No permit holder shall assign, transfer, or sell any FOG Wastewater Discharge Permit issued under these Regulations nor use any such permit for or on any premises or for facilities or operations or discharges not expressly encompassed within the underlying permit.
- B. Any permit that is transferred to a new owner or operator or to a new facility is void.

1.9 FACILITIES REQUIREMENTS

DRAWING SUBMITTAL REQUIREMENTS

Upon request by the City:

- A. Food Service Establishments will be required to submit a minimum of four copies of facility site plans, mechanical and plumbing plans, and details to show all sewer locations and connections. The submittal shall be in a form and content acceptable to the City for review of existing or proposed grease control devices, grease interceptor, monitoring facilities, metering facilities, and operating procedures. The review of the plans and procedures shall in no way relieve the Food Service Establishments of the responsibility of modifying the facilities or procedures in the future, as necessary to produce an acceptable discharge, and to meet the requirements of these Regulations or any requirements of other Regulatory Agencies.
- B. Applicants will be required to submit site plans, floor plans, mechanical and plumbing plans, and details to show all sewers, FOG control devices, grease interceptor or other pretreatment equipment and appurtenances by size, location, and elevation.
- C. Food Service Establishments may be required to submit a schematic drawing of the FOG control device, grease interceptor

or other pretreatment equipment, piping and instrumentation diagram, and wastewater characterization report.

- D. The City requires the drawings be prepared by a Georgia Registered Civil, Chemical, Mechanical, or Electrical Engineer.

1.10 Construction Features

- A. All grease waste interceptors for grease and heavy solids shall so be designed and located as to be readily accessible for cleaning. Grease waste interceptors shall be constructed in accordance with the design specifications contained herein, shall be approved by the City Planning, Zoning, and Building Department.
- B. **Construction of Interceptor.** Each interceptor shall be prefabricated or field fabricated and have at the minimum one baffle that shall extend the full width of the interceptor, extending from the bottom to within six (6) inches of the top. The baffle shall have an inverted long radius elbow fitting or other approved means equivalent in size to the inlet piping but in no case less than four (4) inches in size installed in the inlet compartment side of the baffle with the fitting placed twelve (12) inches above the bottom of the interceptor. Minimum depth of the liquid shall be forty-two (42) inches. There shall be a minimum of two manholes with covers that are gas-tight in construction having a minimum opening of twenty-four (24) inches in diameter (one over the inlet and one over the outlet) to provide access for cleaning and inspection of all fixtures and compartments of the grease waste interceptor. A minimum of one manhole every ten (10) Feet of grease waste interceptor length; Additional manhole shall be required for each additional ten (10) feet in length. The grease waste interceptor shall be located at least twenty-five (25) feet from the last appliance connected to the grease line within the building. In traffic areas, the grease waste interceptor shall be designed to have adequate reinforcement and cover (including piping) meeting HS-20 traffic loading specifications. Grease Waste Interceptors in traffic areas require concrete driving surface over piping with structural backfill around piping. **Reference: Grease Waste Interceptor Standard Detail including size shall be shown on the approved construction plans.**
- C. **Inlet and outlet piping.** The inlet and outlet piping shall have a two-way cleanout tee installed and leveled. The tee and pipe shall be no less than four (4) inches in diameter. The tee shall be installed with the run in the vertical orientation. Inlet piping shall enter at two-and-one-half (2 1/2) inches above the invert of the outlet piping. Inlet piping shall extend to twenty-four (24) inches below the water level of the interceptor. The outlet pipe shall extend to thirty-six (36) inches below the water level of the interceptor.

D. Venting of grease waste interceptors

Each grease waste interceptor shall be vented where subject to a loss of trap seal. The Grease Waste Interceptor shall be designed so that it will not become air bound if a closed cover is used. The Grease Waste Interceptor and discharge line shall each be vented and the vents shall not be tied together less than forty-two (42) inches above the tank lid elevation

E. Access and maintenance of grease waste interceptors.

Access shall be provided to each grease waste interceptor for service and maintenance by a minimum of two manholes with covers having a minimum opening of twenty-four (24) inches in diameter (one over the inlet and one over the outlet) to provide access for cleaning and inspection of all fixtures and compartments of the grease waste interceptor. Grease waste interceptors shall be maintained by periodic removal of accumulated grease, scum, oil, or other floating substances and solids deposited in the grease waste interceptor.

1.11 Grease Waste Trap and Interceptor Operation and Maintenance.

- A. All Food service facilities with grease waste traps or interceptors having a greater than 100-gallon capacity are required to utilize a grease waste hauler permitted by the State of Georgia EPD to pump grease waste from the grease waste trap or interceptor. Any discharge, overflow or spill that leaves the confines of the grease interceptor and or sanitary sewer as a result of improper maintenance shall be classified as a "pass through" and shall result in a violation, subject to appropriate penalties until such a time that the situation has been corrected and cleanup process is underway.
- B. Grease waste interceptor cleaning and maintenance shall include pumping the grease waste interceptor empty at a minimum every 90 days, and cleaning the side walls, baffle walls, cross-pipes and inlet and outlet pipes. Internal piping shall be immediately restored to their original design configuration should any damage occur. Covers on inlet and exit pipes shall be installed. If multiple grease waste interceptors are installed, all traps in the series must be pumped according to the maintenance schedule.
- C. No emulsifiers, grease cutters or other chemicals, which could cause grease to pass through the grease waste interceptor, may be used in the maintenance of a grease waste interceptor or its drain lines. A live bacterial product, which does not contain any enzymes, surfactants, emulsifiers, or substances that act as solvents for fat and does not affect the wastewater collection system may be used in the cleaning and maintenance, upon approval by the City based on formulation and operational criteria such as material safety data sheets.
- D. Grease waste interceptors must be pumped out completely and left empty. Decanting or pump and return of grease waste are prohibited.

- E. In-ground grease waste interceptors shall be pumped at a frequency that maintains a grease and oil layer of less than ten (10) inches on top of the grease waste interceptor and a solids layer of less than eight (8) inches on bottom of the grease waste interceptor. The measurement point for determination of the grease and solids layer shall be adjacent to the outlet pipe. The Grease Interceptor shall be pumped a minimum of every 90 days.
- F. Under-sink grease waste traps shall be cleaned at a minimum of once per week monitored by the food service facility daily, or more often as necessary to prevent pass-through of grease and other food solids into the wastewater collection system. Removal of grease waste and sediments is required when operational capacity is reduced to 80% or less. This is calculated by the volume of the top (grease) layer added to the volume of the bottom (sediment) layer, the sum of the layers are divided by the total operational volume – [(Top inches + Bottom inches)/ total operational inches].
- G. The food service facility shall be responsible for opening access covers or manhole covers to the grease waste interceptor for inspection by The City.
- H. The grease waste interceptor area and monitoring facilities shall be maintained safe, clear of debris, and accessible at all times for observation, inspection, sample collection and flow measurement of the food service facility's discharge to the wastewater collection system.
- I. Manholes shall be maintained at least to finish grade and will be maintained to prevent inflow.

1.12 Record Keeping

- A. Pumpage from a grease waste interceptor shall be tracked by the State of Georgia EPD's approved manifest that confirms pumping, hauling and disposal of waste. The manifest shall contain the following information:
 - 1. Grease waste interceptor information:
 - Interceptor capacity
 - 2. Grease waste hauler information:
 - Volume pumped in gallons
 - Georgia EPD FOG Permit Number
 - Date and time of pumping
 - Truck decal & permit number issued by Bryan County Health Department
 - 3. Destination information disposal site or facilities:

- Volume received/treated
- Driver name
- Signature of operator verifying disposal site and facility information.
- Signature of operator at Disposal site, number of gallons, date and time of disposal

B. A log of pumping and maintenance activities shall be maintained by the food service facility manager for the previous 3 years. The log of pumping activities shall be posted in a conspicuous location for immediate access by the City's personnel. The log shall include:

- date, time
- maintenance performed or volume pumped
- grease waste hauler's name
- name of person performing the maintenance (hauler, plumber or vendor)
- State of Georgia EPD FOG Disposal Permit Number and the Bryan County Health Department's decal number of Company performing all applicable work to the interceptor or associated plumbing.
- Name, license number and grease waste hauler's signature.

2.0 Other Types of Interceptors and Sizing Requirements

A. Laundries

Typical applications include commercial/institutional Laundromats and dry-cleaners. The waste discharge from these facilities usually contains high quantities of lint, silt, dissolved and suspended solids, as well as detergents.

A lint interceptor is commonly referred to as a "lint trap", typically located outside of the building and buried below grade. The principal advantage is the cooling effect obtained by the earth. The buried interceptor is typically constructed of precast concrete, providing years of continuous service. The interceptor contains several compartments where the lint will coagulate and float to the surface and heavier solids will sink to the bottom. The discharging effluent comprises of the clearer water between these layers. Inlet and outlet piping shall be a minimum of four (4") inches or the size of the building sewer whichever is greater. In traffic areas, the trap shall be designed to have adequate reinforcement and cover (including piping), meeting HS-20 traffic loading specifications. Lint traps in traffic areas require a concrete driving surface over piping with structural backfill around piping.

Maintenance. The lint interceptor should be cleaned (or pumped out) routinely to prevent the escape of appreciable quantities of grease. Cleaning should be performed when the interceptor is at 75% of lint/silt retention. The frequency of cleaning at any given installation will vary

depending on use. Pumping frequencies for Laundromats usually range from once a month, to once every six months.

Sizing criteria. The different variables include: number of washing machines, wastewater flow rate, wastewater detention time, and storage factor and detention time.

Commercial laundries, laundromats, and dry-cleaners shall be equipped with an interceptor in order to reduce the quantity of lint and silt that enters the collection system. The system must be of adequate size and design to allow for cool-down of wastewater so that separation can be more readily achieved. In addition, the interceptor must be "equipped with a wire basket or similar device, removable for cleaning, which prevents passage into the drainage system of solids 0.5 inch (12.7 mm) or larger in size, string, rags, buttons or other materials detrimental to the public sewerage system". (1003.6 International Plumbing Code 2003).

Sizing must be in accordance with guidance found in the Uniform Plumbing Code (UPC), Appendix H which uses the following formula:

$$(TGC) \times (CPH) \times (RT) \times (ST) = \text{Size of Lint Interceptor (gallons)}$$

Where:

TGC = Total Gallons per Cycle CPH = Cycles per hour

RT = Retention time

2.5 for Institutional Laundry

2.0 for Standard Commercial Laundry

1.5 Light Commercial Laundry

ST = Storage Factor, based on hours of operation;

1.0 for 8 hours of operation

1.5 for 12 or more hours

Currently, no effluent sample well is required for small commercial laundries. However, large and/or industrial laundries may be subject to Federal Pretreatment regulations.

B. Car Washes

For commercial car washes, separators shall have a minimum capacity of 1000 gallons for the first bay, with an additional 500 gallons of capacity for each additional bay.

Wash racks must be constructed to eliminate or minimize the impact of run-off from rain/storm events. Minimum requirements are roofed structures with at least two walls and appropriate grading to prevent storm water infiltration into the sanitary sewer.

An effluent sampling well shall be required.

C. Automotive Repair Facilities (Garages and Service Stations) Automotive repair shops which include a floor drain in its areas of operation shall be

required to design, install and maintain a grit trap/oil separator, with a minimum capacity of 50 gallons for the first 100 square feet of area to be drained, plus 1 cu. ft (7.5 gals) for each additional 100 sq. foot of area to be drained into the separator.

An effluent sampling well shall be required.

D. Enforcement

Enforcement of this standard shall be in accordance with the provisions of the most current City of Richmond Hill's FOG Ordinance. Failure to comply with this standard may be grounds for penalty imposition and/or discontinuance of service. Additionally, failure to comply may result in notification to the County Health department for request of enforcement action which may lead to revocation of food service permits.



FOG MANAGEMENT
PLANNING, ZONING, and BUILDING DEPARTMENT
 P.O. Box 250
 Richmond Hill, GA 31324
 Phone 912-756-3345 Fax 912-756-3368

FOOD SERVICE
WASTEWATER DISCHARGE PERMIT APPLICATION

Application to Install Grease Interceptor

Name of applicant/Restaurant Owner:			
Name of restaurant:			
Address:			
Phone # and email address:			
Size of restaurant (# of seats, ft.²):			
Former use of premises – if not new:			
(Cubic Inches) Size/Number of kitchen units to be served			
Type of Unit	Size/Number	Type of Unit	Size/Number
Single compartment scullery	Cubic Inches:	Double compartment scullery sink	Cubic Inches:
Dishwasher capacity (gallons)	Cubic Inches:	Other (s) list below:	Cubic Inches:
Three compartment scullery	Cubic Inches:		Cubic Inches:
Hand sink not required to drain to trap			Cubic Inches:
			Cubic Inches:
If unfeasible to install underground units, state why:			
Other comments:			
I certify that the above information is correct to the best of my knowledge.			
_____ Signature			_____ Date

LIQUID WASTEHAULER MANIFEST

GENERATOR INFORMATION

Business Name: _____
Address: _____ City: _____ State: _____ Zip: _____
Phone: _____ Customer Billing: _____
Waste tank or Trap Capacity: _____ gallons Pump Freq: _____
Waste From: Grease Trap ___ Grit Trap ___ Other _____

I CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE WASTE MATERIAL REMOVED FROM THE ABOVE PREMISES CONTAINS NO HAZARDOUS MATERIAL. I ALSO CERTIFY THAT A REPRESENTATIVE OF THIS BUSINESS WITNESSED THE PUMPING OR INSPECTED THE TRAP AFTERWARDS.

(Date) (Time In) (Print Name)

(Signature)

TRANSPORTER INFORMATION

Business Name: _____
Address: _____ City: _____ State: _____ Zip: _____
Phone: _____ Truck License Number: _____
Gallons Received: _____ Vehicle Permit Number: _____

I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS CORRECT AND THAT ONLY THE TYPE WASTE SPECIFIED IS CONTAINED IN THE SERVICING VEHICLE.

(Driver's License No.) (Driver Name - Print)

(Date) (Time Out) (Signature)

DISPOSAL INFORMATION

Business Name: _____
Address: _____ City: _____ State: _____ Zip: _____
Phone: _____ Gallons Received: _____

I CERTIFY THAT I HAVE DISPOSED OF THE WASTE IN ACCORDANCE WITH ALL CITY, STATE, AND FEDERAL LAWS.

(Date and Time Received) (Print Name)

(Signature)



FOG Inspection

Inspector: _____ Inspection Date: _____ Follow Up Date: _____

Purpose of Inspection – New Facility _____ **Non-Compliance** _____ **Routine** _____

Facility Name: _____ **Contact:** _____

Address: _____ **Phone:** _____

_____ **Fax:** _____

Facility Type: _____

Hauler/Transporter Name: _____ Disposal Location: _____

C/O Frequency: Weekly _____ Monthly _____ Quarterly _____ Bi-Annual _____ Annually _____

Description of Grease Interceptor/Trap: _____

Comments: _____

STATUS: Compliance: _____ **Non-Compliance:** _____ **Pending:** _____

All food service establishments will be inspected. Unannounced inspections will also occur sporadically in all food establishments to regulate proper maintenance. Our agency uses the following criteria to inspect and is referred to as the **25% rule**:

Percent of Trap Filled	Trap Condition
25	Good
25-50	Fair
>50	Poor

If the grease trap is in fair condition, the food establishment should be advised to keep an eye on the maintenance schedule. In order to avoid excess accumulation of grease in lateral lines and interceptors, cleaning frequency may need to be increased. To determine an effective cleaning schedule, opening the trap regularly can determine build up and necessity of service. Kitchen management practices greatly influence the condition of a grease trap.

In the event that the grease trap of the food establishment is over 50% full, the establishment will be issued a compliance order to have it cleaned within 10 (ten) days. The establishment will then be required to contact the City of Richmond Hill to verify that the grease interceptor has been properly cleaned.

Owner/Manager: _____ **Date:** _____

Inspector: _____ **Date:** _____

NOTES:

1. MANHOLE RING & COVER SHALL BE GAS AND WATER TIGHT PROVIDING A 22" MINIMUM CLEAR OPENING. REFER TO MANHOLE COVER AND FRAME DETAIL.
2. VOLUME OF GREASE TRAP SHALL BE BASED UPON ULTIMATE LOADING. SIZING CALCULATIONS MUST BE APPROVED BY CITY OF RICHMOND HILL. MINIMUM SIZE SHALL BE 1,000 GALLONS. REFER TO SPECIFICATIONS FOR SIZING CALCULATIONS.
3. CONCRETE GRADE RINGS SHALL BE UTILIZED TO BRING COVER TO FINISHED GRADE.
4. GREASE TRAP SHALL BE PRECAST ONLY.
5. CLEANOUTS SHALL BE INSTALLED WITHIN 2' OF GREASE TRAP ON BOTH THE INLET AND OUTLET.

