

## Grease Trap Policy

### I. PURPOSE

This policy is designed to implement and enforce the oil and grease discharge rules of the Sewer Use Ordinance. Nothing in this policy shall negate or override requirements contained in the Sewer Use Ordinance. In the event of any conflict or discrepancy between this policy and the Sewer Use Ordinance, the Sewer Use Ordinance shall apply.

To ensure compliance with the Town of Franklin's Sewer Use Ordinance, this policy provides specific standards for oil and grease interceptors' location, type, size, installation, construction and maintenance. This policy regulates grease discharges to the Publicly Owned Treatment Works (POTW) and may require the issuance of permits to certain non-domestic users and enforcement of general requirements for all users (commercial and residential).

The Town of Franklin's goal with this policy is to prevent excessive introduction of oil and grease into the sewer system and wastewater treatment plant. Oil and grease have the potential for creating sanitary sewer overflows (SSO's), hazardous conditions in the collection system, treatment plant inhibitions, increased treatment cost, fines and other cost for the Town of Franklin.

### II. OVERVIEW

All Food Service Establishments and other users shall provide means of preventing grease and oil discharges to the Sewer Collection System. Where a grease and oil interceptor currently exists or is required by the Town of Franklin, it shall be maintained for continuous, satisfactory and effective operation by the owner, leaseholder or operator at their expense. Grease and oil interceptors shall be of a type and capacity approved by the Town of Franklin's POTW director and shall be located as to be readily accessible for cleaning and inspection. All users are encouraged to use proper grease handling procedures.

It is unlawful for any facility producing oil and grease waste to discharge into the Town's collection system without authorization from the Town of Franklin. Authorization shall be given

to the users in the Town of Franklin's Grease Control Program in the form of a wastewater discharge permit. Upon initial inspection and approval, a certificate shall be issued allowing the discharge of such waste into the collection system. Each oil and discharge permit shall be valid for five (5) years from the issue date of the permit. The user shall apply for a new permit a minimum of ninety (90) days prior to the expiration of the user's existing permit. The terms and conditions of the permit may be subject to modification by the Town of Franklin during the term of the permit as codes and policies are modified. The user shall be informed of any proposed changes in the issued permit at least sixty (60) days prior to the effective date of the change(s). Any changes or new conditions in the permit shall include a reasonable schedule for compliance.

As a condition precedent to the granting of an oil and grease permit, the recipient shall agree to hold harmless the Town and the Town's employees from any liabilities arising from the users operations under this permit.

### III. DEFINITIONS

1.) **Control Authority** means Town of Franklin.

2.) **Food Service Establishment** means any user engaged primarily or incidentally in the preparation of food for human or animal consumption, unless specifically excluded in this definition. The term "food service establishment" does not include any user discharging domestic wastewater from premises used exclusively for residential purposes, so long as the wastewater discharged by such user complies with Article IV of this policy. The term "food service establishment" includes restaurants, motels, hotels, cafeterias, hospitals, schools, bars, delicatessens, meat processing operations, bakeries, and similar operations.

3.) **Grease interceptor and grease trap** mean a device utilized to effect the separation of grease and oils from the wastewater effluent of a user. Such traps or interceptors may be of the outdoor or underground type normally of a 1,000-gallon capacity or more, or the under-the-counter package units which are typically less than 100-gallon capacity. For the purpose of this definition, the terms "trap" and "interceptor" are used interchangeably.

4.) **Grease** includes oils, fats, cellulose, starch, proteins, wax, or grease, whether emulsified or not. These are substances that may solidify or become viscous at temperatures between 32 degrees Fahrenheit and 150 degrees Fahrenheit (zero degrees and 65 degrees Celsius).

5.) **Grease Generating Establishments:** Grease generating establishments shall mean all retail food establishments, catering establishments, commercial food preparation facilities, meat processing facilities, and other establishments that may be capable of accumulating and discharging grease in to the Sewer System.

6.) **Hauler** One who transfers waste from the site of a customer to an approved site for disposal or treatment. The hauler is responsible for assuring that all federal, state and local regulations are followed regarding waste transport.

7.) **Interference** means a discharge which, alone or in conjunction with discharges from other sources, inhibits and/or disrupts the POTW; its treatment processes and/or operations; and/or its sludge processes, use and/or disposal. Interference includes, but is not limited to, a discharge which alone or in conjunction with discharges from other sources causes, in whole or in part, a

violation of one or more of the Town of Franklin's NPDES permits and/or non-discharge permits, and/or to the prevention of sewage sludge use or disposal in compliance with any of the following statutory/regulatory provisions or permits issued there under, or any more stringent state or local regulations: section 405 of the Clean Water Act (33 USC 1345, hereinafter referred to as the "Act"), or any criteria, guideline or regulations developed pursuant to the Solid Waste Disposal Act (SWDA) (42 USC 6901 et seq.), the Clean Air Act, the Toxic Substances Control Act, the Marine Protection Research and Sanctuary Act (MPRSA), or more stringent state criteria, including those contained in any state sludge management plan prepared pursuant to title IV of the Solid Waste Disposal Act, applicable to the method of disposal or use employed by the POTW.

8.) **Owner** means any individual, person from company association, society, corporation, or group upon whose property the building or structure is located or will be constructed.

9.) **Publicly owned treatment works (POTW)** means a treatment works or a combination thereof, as defined by section 212 of the Act (33 USC 1292), which is owned by the Town of Franklin. This definition includes any devices or systems used in the collection, storage, treatment, recycling, and reclamation of sewage or industrial wastes of a liquid nature; any conveyances which convey wastewater to the POTW treatment plant; plant and sewer maintenance personnel; and microorganisms associated with the treatment process itself.

10.) **User** means any person who contributes, causes, or permits the contribution of wastewater into the POTW or proposes such a contribution.

#### **IV. AUTHORITY**

The Town of Franklin's Sewer Use Ordinance Revised and adopted February the 4<sup>th</sup>, 2013

##### **A. Prohibited Discharge Standards**

- (a) **General Prohibitions.** No user shall contribute or cause to be contributed into the POTW, directly or indirectly, any pollutant or wastewater which causes interference or pass through. These general prohibitions apply to all users of a POTW whether or not the user is a significant industrial user or subject to any national, state, or local pretreatment standards or requirements.
- (b) **Specific Prohibitions.** No user shall contribute or cause to be contributed into the POTW the following pollutants, substances, or wastewater:
  - (1) Solid or viscous substances in amounts which will cause obstruction of the flow in the POTW resulting in interference but in no case solids greater than one half inch (1/2") in any dimension.
  - (2) Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through.
  - (3) Any trucked or hauled pollutants, except at discharge points designated by the POTW Director in accordance with section 2.9 of this ordinance.
  - (4) Fats, oils, or greases of animal or vegetable origin in concentrations greater than one hundred (100) mg/l unless authorized by the POTW Director.

**B.**

Grease and oil interceptors shall be provided when, in the opinion of the POTW Director, they are necessary for the proper handling of wastewater containing excessive amounts of grease and oil. All units shall be of type and capacity approved by the POTW Director and shall be located to be easily accessible for cleaning and inspection. Such interceptors shall be inspected, cleaned, and repaired regularly, as needed, by the user at their expense.

**V. AUTHORITY TO INSPECT AND SAMPLE**

Authorized employees of the Town of Franklin, bearing proper identification, will inspect the facilities of any user to evaluate whether the purpose of this policy and the Sewer Use Ordinance are being met and all requirements are being complied with. Persons or occupants of premises where wastewater is created or discharged shall allow the Town of Franklin and the Environmental Protection Agency access at all reasonable times to all areas of the premises for the purposes of inspection, sampling, records examination and copying. The Town of Franklin and the Environmental Protection Agency shall have the right to set up on the user's property such devices as are necessary to conduct sampling, inspection, compliance monitoring and/or metering operations. Where a user has security measures in place which would require proper identification and clearance before entry into their premises, the user shall make necessary arrangements with their security guards so that upon presentation of suitable identification, personnel from the Town of Franklin and Environmental Protection Agency will be permitted to enter, without delay, for the purposes of performing their specific responsibilities. Denial of the Town of Franklin's or the Environmental Protection Agency's access to the user's premises shall be a violation of this policy and the Sewer Use Ordinance, and unreasonable delays may constitute denial of access.

**VI. GENERAL REQUIREMENTS**

**A.** All Food Service Establishments shall have grease-handling facilities approved by the Town of Franklin. Establishments whose grease-handling facilities or methods are not adequately maintained to prevent floatable oils, fat or grease from entering the sewerage system shall be notified by the grease trap inspector at the time of inspection and will be required to sign an inspection report of any noncompliance and will be given a time frame of two (2) weeks to correct the noncompliance. If the noncompliance is not corrected in the two (2) week time frame it will be turned over to the POTW Director and they will allow one (1) week for the noncompliance to be resolved. If the noncompliance is not resolved at the end of this one (1) week period then further penalties or other corrective actions will be assessed (see §§50-070 – 50-072 of the Sewer Use Ordinance for more details) Examples of noncompliance include, but are not necessarily limited to, a collapsed or deteriorated baffle wall, leaks, *infiltration* and *inflow*, improperly located or missing tees, and any other deficiencies that will prevent the *grease interceptor or trap* from working properly.

**B.** All Food Service Establishments grease-handling facilities shall be subject to review, evaluation, and inspection by the Town of Franklin representatives during normal working hours. Results of inspections will be made available to facility owner, leaseholder or operator.

**C.** Food Service Establishments receiving two (2) consecutive unsatisfactory evaluations or inspections may be subject to penalties or other corrective actions as provided for in the Sewer Use Ordinance. See §§51.090-51.092 of the Town of Franklin's Sewer Use Ordinance for further explanation of the penalties

**D.** Food Service Establishments who continue to violate the Town of Franklin Grease Trap Policy requirements may be considered grounds for discontinuance of sewer service.

**E.** Food Service Establishments whose operations cause or allow excessive grease to discharge or accumulate in the Town of Franklin collection system may be liable to the Town of Franklin for costs related to the Town of Franklin service calls for line blockages, line cleanings, and pump repairs, etc. including all labor, materials, and equipment. Failure to pay all service-related charges may also be grounds for sewer service discontinuance.

**F.** Regularly scheduled maintenance of grease-handling facilities and equipment is required to ensure adequate operation. All grease traps must be cleaned (*by a Town of Franklin approved grease handling and hauling company*), maintained and repaired as needed. All grease traps must be pumped out completely. Outside traps should be pumped quarterly and small under the sink grease traps should be pumped monthly or at the discretion of the Town of Franklin. In the maintaining of grease interceptors, the owner, lease-holder or operator shall be responsible for approved grease removal and disposal, and shall maintain on-site records of dates, and means of disposal.

The introduction of emulsifying agents such as chemicals, solvents or enzymes directly or indirectly into the grease interceptor, other than what is considered typical business operational practices such as dishwashing or sanitation, is strictly prohibited. By approval from the Town of Franklin, products which reduce Fats, Oil and Grease (FOG), such as bacteria, may be used in addition to the regular grease interceptor maintenance program, but shall not be a consideration in determining grease interceptor seizing or maintenance frequency. In any case, the discharged waste shall comply with all applicable provisions of the Town of Franklin Sewer Use Ordinance, Wastewater Discharge Restrictions and all state and federal Laws.

**G.** The user shall maintain a file on site of the records and other documents pertaining to the facility's grease interceptor. The file contents shall include, but are not limited to, as-built drawings, record of inspections, log of pumping activities and receipts, log of maintenance activities, hauler information, disposal information and monitoring data, if required. The file shall be available at all times for inspection and review by the Town of Franklin. Records shall be maintained for a period of three (3) years except for as-built drawing which should remain for the life of the grease trap at the food service establishment.

**H.** Owner shall be responsible for ensuring that no waste or wastewater pumped from the grease interceptor/grease trap is reintroduced back into the interceptor. This is a violation of the Town of Franklin Sewer Use Ordinance and can result in enforcement action. However this provision shall not apply if reintroduction is expressly allowed, in writing and signed by the POTW Director; provided further that a Town of Franklin Waste Water Treatment Plant representative must be on site and witness the reintroduced water and its characteristics.

**I.** Any Food Service Establishment whose effluent discharge to the sewerage system is determined by the Town of Franklin to cause interference in the conveyance or operation of the

sewerage system may be required to sample its grease trap discharge and have it analyzed for oil and grease at the expense of the owner, lease-holder or operator. Results of such analyses shall be reported to the Town of Franklin.

**J.** All grease traps/interceptors shall be designed and installed to allow for complete access for inspection and maintenance of the inner chamber(s) and viewing and sampling (sanitary Tee) of effluent wastewater discharged to the sewer.

**K.** Food Service Establishments shall adopt procedures for handling sources of floatable oils, fat or grease originating within their facility. A notice shall be permanently posted at a prominent place in the facility-advising employees of the procedures to be followed.

**L.** Food Service Establishments shall develop and implement a Waste Minimization Plan pertaining to the disposal of grease, oils and food particles. "No Grease" signs or posters shall be posted at each fixture that drains to the grease trap.

**M.** Food Service Establishments should train their employees on proper grease disposal practices and maintain documentation that each employee has received such training.

**N.** Grease haulers who are permitted by the Town of Franklin who service grease traps must have a Town of Franklin Waste Water Treatment Plant representative on site to witness the operation and ensure proper cleaning of the grease trap.

## **VII. DESIGN AND CONSTRUCTION STANDARDS**

### **A. New Facilities**

1. All new Food Service Establishments shall be required to install a grease interceptor, according to the Town of Franklin Grease Trap Policy and guidelines. Grease interceptors shall be adequately sized, with no interceptor less than 1,000 gallons total capacity unless otherwise approved by the Town of Franklin.

2. No new Food Service Establishments will be allowed to initiate operations until grease-handling facilities are approved by the Town of Franklin.

3. All grease interceptors, whether singular or two tanks in series, must have each chamber directly accessible from the surface to provide means for servicing and maintaining the interceptor in working and operating condition.

4. A basket, screen or other intercepting device shall prevent passage into the drainage system of solids 1/2 inch or larger in size. The basket or device shall be removable for cleaning purposes.

5. No food grinders are allowed to be plumbed into the grease trap. Excess food and scraps should be disposed of into the garbage.

6. Designers wishing to install grease interceptor during a shell phase of construction where the tenant is unknown or the tenant's space design is not far enough along to determine

kitchen layout and grease interceptor capacity shall install a minimum 3,000 gallon capacity trap.

7. Tanks installed in traffic areas shall be traffic rated by manufactured product only.

8. Tenant spaces shall not share a grease interceptor.

9. For interceptors that are remotely located (more than 10 feet from tenant space), the designer shall provide (on all drawings) methodology to handle grease build-up in excessively long grease lines.

10. All new facilities shall have a sample point (or box) for collection of a Fats, Oils and Grease sample for analysis.

### **B. Existing Facilities**

All existing facilities should comply with all of the general requirements set forth in this policy. If the existing facility ever sells or goes under new ownership then the facility must comply with section VII (C) of this policy no exceptions.

### **C. New Food Service Establishments in Existing Buildings**

1. Where practical, new Food Service Establishments locating in existing buildings will be required to comply with the grease trap standards applicable to new facilities. (See subsection A of this article "New Facilities," above).

2. Where physically impossible to install "outdoor" units, "under-the-counter" units may be allowed as with existing food service establishments provided prior approval of unit type, size, location, etc. is obtained from the Town of Franklin.

## **VIII. EXCEPTIONS**

Under certain circumstances, the interceptor size and location may necessitate special exceptions to this policy. If an exception to this policy is requested, the user must demonstrate that the size and location will not cause the facility any problems in meeting the discharge requirements of the Town of Franklin. The intent of this policy is to ensure compliance with the Town of Franklin's Wastewater Discharge Restrictions which is required by the United States Environmental Protection Agency. This policy is in no way intended to discourage development, but rather to protect the facilities and the Town of Franklin's infrastructure as it relates to the sanitary sewer system.

## **IX. MAINTAINING A GREASE INTERCEPTOR**

1. Pump out schedules shall be properly established and strictly followed to prevent overflows, downstream blockages, excessive oil and grease, and BOD loading to the POTW.
2. Pump outs shall be complete, including both influent and effluent sections, the side walls and baffles shall be scraped down to remove excess accumulation of grease.

3. The Food Service Establishments shall not "hot flush" (continuously run hot water over 140 °F), as this practice will cause a bypass of the grease trap causing the grease to congeal downstream and cause problems in the collection system. Any Food Service Establishment found doing this will be liable for any cost of repairs and/or cleaning of lines.

**X. ENFORCEMENT**

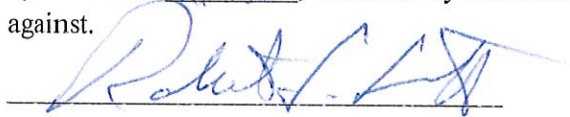
Enforcement of this policy shall be in accordance with the provisions of the Town of Franklin Enforcement Response Plan. Failure to comply with this standard may be grounds for penalty imposition and /or discontinuance of service. Additionally, failure to comply may result in the notification to the Macon County Health Department.

**XI. MODIFICATION**

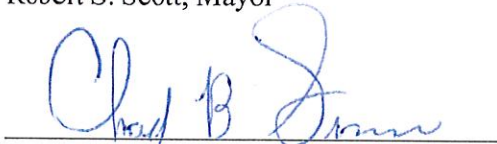
This policy may be modified or changed by the Town of Franklin at any time in accordance with the requirements of the Town Code of Ordinances, North Carolina General Statute and Federal Regulations.

Should there be any questions concerning this policy, all questions should be directed to the Town of Franklin POTW Director Mr. Wayne Price 828-524-2516 Ex. 347 or by mail to PO Box 1479, Franklin, NC 28744.

Adopted at the regular meeting of the Board of Aldermen, this 3<sup>rd</sup> day of November, 2014, upon motion by Alderman Jamison, seconded by Alderman McBee, and passed by a vote of 5 in favor and 0 against.



Robert S. Scott, Mayor



Attest

Chad Simons, Clerk



Date



## OUTDOOR GREASE INTERCEPTOR SIZING

### The Manning Formula:

Interceptor Size (in gallons) = Flow rate (GPM)/sink or fixture x sum of fixture Ratings + the Discharge rate from any mechanical washers (i.e. dishwashers, glass washers, laundry machines, etc.) x a 24 minute retention Time.

The summarized version being:  $I = [(Fr) \times (R)] + (D) \times (T)$

**Flow rate**, measured in gallons per minute (GPM), is determined based on the slope, pipe texture, and pipe diameter. The following rates are pre-calculated. Apply them to your calculation, as demonstrated in the examples below.

0.5" pipe = 0.8 GPM/fixture

1.0 " = 5.0 GPM/fixture

1.5 " = 15 GPM/fixture

2.0" = 33 GPM/fixture

2.5" = 59 GPM/fixture

3.0" = 93 GPM/fixture

**Fixture ratings** of grease-laden waste streams are pre-determined values for specific kitchen drainage points, such as sinks, wash basins, and floor drains. Essentially, these values represent factors by which you can multiply the flow rate of a drainage pipe to get the potential rate of water movement out of the fixture. Apply them to your calculation, as demonstrated in the examples below.

2, 3, or 4 compartment sink = 1.0

1 or 2 compartment meat prep sink = 0.75

Pre-rinse sink = 0.5

1 or 2 compartment vegetable prep sink = 0.25

Can wash = 0.25

Mop sink = 0.25

Floor drain = 0.00

**The discharge rate** from dishwashers, laundry machines, glass washers, etc. must be added to your Manning Formula calculation because of their potential for introducing large quantities of water down the drain in a short amount of time. The user's manual for these appliances should indicate the manufacturer's discharge rate in GPMs, or you can call the manufacturer directly. Apply them to your calculation, as demonstrated in the examples below.

**The 24 minute retention time** is a pre-calculated amount of time that engineers have determined to be necessary for grease to separate from water. And, as always, apply it to your calculation, as demonstrated in the examples below.

**Example 1:** A restaurant has the following fixtures in its kitchen (all fixtures have a 1.5 inch diameter pipe):

(1) 3-compartment pot sink

1 pre-rinse sink

(1) 2-compartment vegetable prep sink

1 dishwasher that discharges 10 GPM

Based on the Manning Formula:

$$I = [(Fr) \times (R) + (D)] \times (T)$$

$$= 15 \text{ GPM} \times [1 + 0.5 + 0.25] + 10 \text{ GPM}] \times 24 \text{ minutes}$$

$$= [(15 \text{ GPM} \times 1.75) + 10 \text{ GPM}] \times 24 \text{ minutes}$$

$$= 26.25 \text{ GPM} + 10 \text{ GPM} \times 24 \text{ minutes}$$

$$= 870 \text{ gallons}$$

**Rounded up to the next size interceptor means a 1,000 gallon interceptor is required!**

## Enforcement Response and Penalty / Sewer Use and FOG Programs

For Restaurants / Facilities that own grease trap -- after inspection

Notification- that grease trap is bad and somebody has been notified

10 days notice to have it pumped

At the 10<sup>th</sup> day a re-inspection occurs if it has not been pumped they are told again to have it pumped and they are granted another 10 days to have it pumped if it is not pumped at the end of those 10 days then there is a \$500.00 fine

Penalty after fine- for every day thereafter is \$50.00 penalty until the owner, proprietor has unit pumped and cleaned

Grease water dumped into system by: Pump Grease Haulers is .05¢/ gallon

Grease water is subject to examination – look at sample if suspicious of being over a 100mg/l it shall be sampled and an oil and grease test performed by commercial lab at the Towns discretion and the hauler will also pay for the test.

Surcharge for grease over 100 mg/l = \$50.00 / lb

The fee for testing = \$65.00

Example: FOG results from lab at 585mg/l and the tanker size is 2200 gallon

Formula – lbs (pounds) = gallons (Flow) X 8.34 X mg/l

Lbs = 2200 x 8.34 x 485 (585-100)

Lbs = .0022 x 8.34 x 485 = 8.9 lbs

Lbs = 8.9 lbs of grease

Surcharge 8.9 lbs of grease x \$50.00 = \$445.00

*Note if 2 or 3 loads are hauled from the same batch the sample will be collected and mixed together to get a more precise sample to be tested to determine actual grease content*