TOWN OF FARMVILLE
CODE OF ORDINANCES
CHAPTER 5 – REGULATIONS FOR FATS, OIL AND GREASE (FOG)

Section 1.0 INTRODUCTION

1.1 Fats, oil and grease (FOG) is a leading cause of sanitary sewer overflows (SSO) in North Carolina. Grease is a common term for animal fats and vegetable oils. Residential and Commercial Users, who are often unaware that they are causing potential harm, introduce FOG from their cooking processes, into their plumbing system and the Town's sanitary sewer system. Over time FOG builds up and clogs pipes and plumbing. In the collection system, FOG leads to blockages, which can cause sewer overflows onto streets and property, and into homes and businesses. These overflows disrupt residential, commercial and industrial operations, and carry the potential for health risks which comes from contact with disease-causing organisms. Raw sewage can carry bacteria, viruses, parasitic organisms, etc., which may bring diseases from mild gastroenteritis (diarrhea) to life threatening ailments such as cholera, dysentery, and hepatitis. They also increase sewer system maintenance costs and present potential impacts to our environment.

Section 2.0 DEFINITIONS

2.1 **Town** – Town of Farmville, North Carolina

2.2 **Director** – The Town's Director of Developmental Services

2.3 **FOG** – material either liquid or solid, composed primarily of fat, oil, or grease from animal or vegetable sources. Examples of FOG include kitchen cooking grease, vegetable oil, bacon grease, etc.

2.4 **Food Handling Facilities** – Any commercial or institutional facility discharging kitchen or food preparation wastewaters including restaurants, motels, hotels, cafeterias, hospitals, schools, bars, churches, etc.

2.5 **Grease Interceptor** – A device, usually located underground and outside of a food handling facility designed to collect, contain, and remove food wastes and grease from the wastewater while allowing the remaining wastewater to be discharged into the Town's wastewater collection system by gravity,

2.6 **Grease/Solids Depth** – The grease/solids depth consists of the combined depth of the grease cap at the top of the Grease Interceptor's liquid level and the solids deposition at the bottom of the interceptor. *(Example: The grease cap at the top*

of the liquid measures six inches and the solids at the bottom measures eight inches for a combined accumulation of 14 inches. The Interceptor's liquid level is 48 inches. The grease/solids depth is 14 divided by 48 times 100 or 29% of the liquid depth.)

2.7 **Grease Trap** – Indoor, "under the counter" units designed to collect, contain, and remove food wastes and grease from the wastewater while allowing the remaining wastewater to be discharged to the Town's wastewater collection system by gravity.

2.8 **Oil/Water Separator –** A device, designed to remove oil (e.g. petroleum based products) from the waste stream while allowing the remaining wastewater to be discharged to the Town's wastewater collection system by gravity.

2.9 **User –** Any person, establishment, or facility that contributes, causes, or permits the contribution of FOG into the Town's wastewater collection system.

2.10 **User** – Any person, establishment, or facility that contributes, causes, or permits the contribution of FOG into the Town's sanitary sewer system.

2.11 **Variance** – A written document issued by the Town's Developmental Services Director that modifies and/or changes requirements of the FOG program for a specific User.

Section 3.0 FOG REDUCTION BEST MANAGEMENT PRACTICES

3.1 The best way to reduce FOG in your plumbing and the Town's sanitary sewer system is to keep it from going down the drain in the first place. Household sinks (bathroom and kitchen) and toilets all discharge to the sanitary sewer system.

3.2 Some best management practices that residents can practice to reduce FOG generation include:

3.2.1 Be careful of what you put down the drains or flush down your toilets!
3.2.2 Scrape, or dry wipe, cooled excess grease from frying pans, pots and dishes into Containers (old milk cartons, frozen juice containers, etc.) or a plastic garbage bag, and dispose of in the garbage. Cat litter or used coffee grounds can absorb the liquid in the container.
3.2.3 Pour all cooking oils (including salad oils, frying oil/grease, bacon fat, marinades, etc.) into a container for ultimate disposal with the trash.
3.2.4 Place leftover foods, meat trimmings, etc. in the trash can and not down the garbage disposal.
3.2.5 Never dump motor oil or other lubricants down the drain. Take them to a collection station.
3.2.6 Never use the toilet for disposal of kitchen wastes. Also, do not flush disposable diapers, paper towels, and other bulky paper products down

the toilet. These bulky items, combined with the grease build-up will stop the flow of wastewater through private plumbing and the sewer system.

3.3 Controlling grease at its source goes a long way toward eliminating blockages and backups that result from grease build-up. Appendix A is a *Fact Sheet For Best Management Practices* for commercial establishments prepared by the North Carolina Pretreatment Coordinators. Special procedures may be required for specific applications.

Section 4.0 GENERAL REQUIREMENTS

4.1 In order to reduce sewer blockages, Food Handling Facilities that discharge into the Town's sanitary sewer system must install a Grease Interceptor or Trap. Grease Interceptors shall be required at the User's expense, when such User operates food preparation or serving facilities. Grease Interceptors may be required in other commercial or industrial applications when deemed necessary by the Director.

4.2 The Director reserves the right to make determinations of Grease Interceptor or Grease Trap adequacy, need, and effectiveness based on a review of all relevant information regarding Grease Interceptor/Trap performance, maintenance, and facility site/building review. To assure adequacy and effectiveness, the Director may require repairs, modifications or replacement of such Interceptors or Traps. The Director may request specific information impacting potential FOG production including menus, hours/days of operation, food preparation procedures, clean up practices, etc.

4.3 Automotive related facilities that may contribute petroleum-based oil to the Town's sanitary sewer collection system are required to install an EDA or DENR approved Oil-Water Separator

4.4 Wastewater from sanitary facilities shall not be introduced into any Grease Interceptor, Grease Trap or Oil/Water Separator

4.5 New Food Handling Facilities will not be allowed to initiate operations until a Grease Interceptor is inspected and approved by the Town.

4.6 All existing cooking establishments shall have Grease Interceptors approved by the Director or his designee. Cooking establishments without Grease Interceptors will be given a compliance deadline not to exceed 12 months from the date of ratification of this ordinance.

4.7 Any facility with an existing Grease Interceptor or Trap that anticipates expanding food handling or preparation operations must receive approval from the Director.

Section 5.0 AUTHORITY

5.1 The North Carolina Clean Water Act of 1999 required jurisdictions to obtain a permit from the North Carolina Department of Environment and Natural Resources for the operation of a wastewater collection system.

5.2 On May 1, 2007, the Town of Farmville was issued a Wastewater Collection System Permit (Permit No. WQCS00069). A condition of that permit is that the Town develop and implement an enforceable fats, oils and grease program for non-residential users under which the Town can take enforcement against users who have not properly installed, operated and maintained grease traps or grease interceptors as directed or otherwise violated the terms of the local ordinance pertaining to fats, oils and grease.

Section 6.0 DESIGN GUIDELINES

6.1 Detailed plans, showing the Grease Interceptor facilities and operating procedures, must be approved by the Town's Building Inspector, in consultation with the Director prior to construction. The review and approval by the Town shall in no way relieve the User from the responsibility of meeting effluent discharge limitations or properly maintaining the device.

6.2 Grease Interceptor Design. Outside, in ground, Grease Interceptors are required for all Food Handling Facilities, unless a Variance is granted by the Director. Grease Interceptors are typically pre-cast concrete units that are plumbed to receive only kitchen wastes (pot sinks, prep sinks, can wash, floor drains, dishwasher, and food grinder waste). The Grease Interceptor should be located as close to the source as possible, and in a manner that is fully accessible for regular and safe maintenance, cleaning and sampling, without creating a nuisance.

6.3 A registered North Carolina Professional Engineer (PE) must affix his seal to all designs that encroach public right-of-way (not on private property).

6.4 Minimum design criteria for pre-manufactured Grease Interceptors shall include:

- 6.4.1 Minimum capacity of 1,000 gallons
- 6.4.2 9 inches of freeboard above the normal liquid level to the top of the interceptor
- 6.4.3 2-inch inlet and outlet differential
- 6.4.4 3-inch minimum wall thickness and reinforced with 6-inch x 6-inch, #10 gauge welded wire
- 6.4.5 Minimum concrete compressive strength of 3,500 psi
- 6.4.6 Minimum 2:1 length/width ratio
- 6.4.7 At least two compartments with an interior baffle wall located two-thirds

to three-quarters of the distance from the inlet end wall, vented at the top and with adequate flow through holes

6.4.8 Outlet tee constructed of PVC, PE or equivalent, minimum class 160 pipe extending 50 Percent of liquid depth

6.4.9 24-inch minimum access openings over both compartments brought up to at least finished grade and protected from surface water runoff. Access covers shall be cast iron or equivalent

6.4.10 Design shall facilitate sampling of the interceptor's effluent, measurement of the grease Layer, and clean out pumping operations

6.4.11 Watertight per vacuum or exfiltration test

6.4.12 Properly sealed joints to prevent infiltration and exfiltration

6.5 Minimum structural criteria shall include:

6.5.1 Minimum structural design at 150 lbs./ft² (non-vehicular traffic installations)

6.5.2 H-20 bridge load for vehicular traffic conditions

6.5.3 ACI Building Code 318 (reinforced concrete design)

6.5.4 ASTM C1227-93 Standards for Pre-cast Concrete Tanks

6.5.5 ASTM C890 Structural Design Load for Pre-cast Water and Wastewater Strutures

6.6 Grease Traps

Indoor, point source Grease Traps incorporated into the kitchen plumbing may be allowed if the installation of a suitable outdoor Grease Interceptor is infeasible or unnecessary, a "hardship" is acknowledged, and the Director approves a variance (See Section "10. Variance"). Certain conditions may be imposed by the Director with the issuance of a Variance, such as an increased clean-out frequency, further study, etc.

6.7 A licensed North Carolina Plumbing Contractor shall install all Grease Interceptors and Grease Traps in compliance with the latest edition of the North Carolina State Plumbing Code and obtain a building permit from the Town prior to installation.

6.8 *The User shall verify that the minimum tankage required based on the anticipated flow rates and organic loads, using generally accepted methods of design such as Environmental Protection Agency, North Carolina Division of Environmental Health or Uniform Plumbing Code methods.* ***The User shall be solely responsible for the performance of the device and it's ability to consistently reduce effluent FOG concentrations below 100 mg/l*** *as measured by EPA Method 1664A.*

Section 7.0 MAINTENANCE PRACTICES/RECORDS

7.1 Grease Interceptors and Traps should be cleaned as frequently as necessary to maintain FOG concentrations below 100 mg/l in the effluent, but in no case shall cleaning intervals exceed 30 days. Grease Traps may require more frequent cleaning. Grease Interceptors with a combined grease/solids depth (see Section "2. Definitions") of greater than 255 of the liquid depth are also considered in violation.

7.2 Haulers are required to use Town-approved equipment that contains incremental depth markings on a plastic cylinder to measure the grease cap and solids deposition depths.

7.3 All waste removed from the Grease Interceptor or Trap must be disposed of at a facility permitted by the North Carolina Division of Solid Waste to receive such waste. The User shall be responsible for the proper removal and lawful disposal of the Grease Interceptor/Trap waste.

7.4 The use of enzymes, chemical, or biological additives is not considered an acceptable Grease Interceptor/Trap maintenance practice.

7.5 All Food Handling Facilities that discharge into the Town's sanitary sewer system shall maintain written records, on site, of maintenance activities for grease removal devices. A copy of the Grease Removal Device Maintenance Form, "Maintenance Form", contained in Appendix B, shall be completed and delivered or mailed to the Director on a monthly basis, or according to the frequency schedule stipulated in the Town-issued variance. The Town is not responsible for documents that are not received at the address below. Completed Maintenance Forms are required for facilities that remove FOG using Grease Interceptors or Grease Traps and shall be submitted to:

Director of Developmental Services
P.O. Box 86
Farmville, N.C. 27828

7.6 A Grease Removal Device Maintenance Log, "Maintenance Log" that summarizes maintenance activities in provided in Appendix D. This form shall be clearly posted in the kitchen at all times, and in plain view of kitchen workers, to illustrate maintenance activities and compliance with these regulations. The Maintenance Log shall summarize information contained on the Maintenance Form for interceptor installations.

7.7 The Maintenance Log shall be updated <u>every time</u> a Grease Trap is cleaned out. Grease Trap maintenance typically involves removing the contents of the Grease Trap for interim disposal in an outdoor, on-site, grease storage barrel. The waste hauler then removes the contents of the grease storage barrel for ultimate and completes the Maintenance Form, with appropriate signatures for the waste

hauler and the User. The Maintenance Form is then submitted to the Town at the required frequency interval.

7.8 Maintenance records shall be kept by the User for at least three (3) years and shall be provided upon request from representatives of the Town of the Pitt County Health Department. Failure to provide maintenance records upon request shall be considered a violation.

Section 8.0 DETERMINATION OF COMPLIANCE WITH MAINTENANCE REQUIREMENTS

8.1 A Grease Interceptor shall be considered out of compliance if any of the following conditions exist:

8.1.1 FOG Concentrations are found to exceed 100 mg/l as measured by EPA Method 1664A
8.1.2 Maintenance cleaning has not been accomplished every 30 days, unless a Variance is granted
8.1.3 The grease/solids depth exceeds 25% of the liquid depth
8.1.4 Failure to submit records
8.1.5 Inspection hindrance
8.1.6 Failure to maintain on-site records
8.1.7 Failure to maintain Interceptors or Traps in proper working order
8.1.8 Source of sewer blockage
8.1.9 Source of sanitary sewer overflow
8.1.10 Falsification of records

8.2 Typically, Food Handling Facilities will be evaluated based on maintenance cleaning compliance and reported grease/solids depths. The Town may perform random inspections to determine if grease/solids depth exceed 25% of the interceptor's liquid depth and/or collect samples for determination of effluent FOG concentrations.

Section 9.0 INSPECTION AND SAMPLING

9.1 The Town may conduct inspections of Food Handling Facilities connected to the sanitary sewer system, as the Town deems necessary to ascertain whether the purpose and requirements of these FOG regulations are being met. Persons or occupants of premises where wastewater is created, discharged or suspected to be discharged, shall allow Town personnel ready access at all reasonable times to all parts of the premises for the purpose of inspection, sampling, and records examination. The Town shall have the right to set up on the User's property such devices as are necessary to conduct sampling, inspection, and compliance monitoring operations. Denial of the Town's access to the User's property shall be deemed a violation. Unreasonable delays may be considered denial of access.

A Grease Interceptor Inspection Form used by the Town is contained in Appendix C.

Section 10.0 VARIANCES

10.1 A Variance to the design and maintenance requirements contained herein may be requested when compliance creates an undue hardship or if a grease trap is sufficient. Hardships caused by space availability, minimal anticipated FOG production, cost, etc., may be grounds for a variance. The User must submit sufficient documentation, as required by the Director, which explains the need to vary from design or maintenance requirements. A minimum of four months of data should be submitted for maintenance cleaning frequency modifications or similar requests.

10.2 After review of the documentation, the Town will notify the Food Handling Facility in writing of acceptance or denial of the Variance request. The Town may also request further study pursuant to or, as a condition of the Variance. Certain conditions may be imposed by the Director for installations that have received a Variance.

10.3 If a Variance is granted and the User subsequently increases anticipated food service production or, the Town later determines that the discharge adversely impacts the sanitary sewer collection system or treatment works, the Variance may be revoked.

10.4 A Variance application fee of $250 will be paid to the Town upon submission of the Variance request and prior to Town review. Variance application fees may be waived at the discretion of the Director for follow up modifications of the same variant issue contained in the original application *(For example, if a variance had been granted to allow maintenance cleaning every two months and, subsequently it can be shown that a three-month maintenance frequency is acceptable, then the fee may be waived.)*

Section 11.0 ENFORCEMENT

11.1 If any residence or Food Handling Facility is determined to be the source, in whole or in part, of a sanitary sewer blockage and/or overflow, the residence or Facility will be assessed a fine of not less than $500 and not more than $10,000, plus remediation costs for clean up, in addition to any fines dispensed from the State of North Carolina. The fines contained herein are not exclusive and the Director may use other methods to remedy the situation, such as the termination of water and wastewater service, legal action, etc.

11.2 The following chart identifies fines for various annual infractions:

Minor Violations

	1st Offense	2nd Offense	3rd Offense	4th Offense & Up
Failure to submit records	Warning	$100	$150	Major Violation
Inspection hindrance	Warning	$100	$150	Major Violation
Failure to maintain on-site records	Warning	$100	$150	Major Violation

Moderate Violations

	1st Offense	2nd Offense	3rd Offense	4th Offense and Up
Failure to maintain interceptors in proper working order	$150	$300	$500	$1,000
Failure to clean out interceptor every 30 days	$150	$300	$500	$1,000

Major Violations

Source of sewer blockage (minimum)	$500
Source of sanitary sewer overflow (minimum)	$1,000
Falsification of Records	$1,000

THIS ORDINANCE shall become effective on March 1, 2010.

Adopted this the 2nd day of February, 2010

Appendix A:

Fact Sheet for Best Management Practices

Appendix B:

Grease Removal Device Maintenance Form

Grease Removal Device Maintenance Form
Town of Farmville FOG Program

Date: _____ SERVICE EVENT: _____
(Pump out, Sampling, Special Event)

Food Handling Facility: _____

Name/Address: _____

_____

_____

Telephone _____

Signature of: _____ Owner

_____ Waste Hauler

Waste Hauler Name _____

Address: _____

_____

_____

NC Permit #: _____

Record of Servcie: (Only Grease Interceptor facilities need to measure grease/solid depths.)

Grease/Solids Depth: _____ in. (grease and solids depth)/ _____ in. (normal liquid depth) x 100 = _____%

Total Gallons Pumped Out _____ (Interceptor and Trap removal facilities must complete)

Description of Service: _____

_____

_____

Suggestions for Maintenance/Management: _____

_____

Destination of Discharge: Waste Processor Name/Location) _____

_____

LAS Permit # _____

Permit Operator: _____ (Print)

cc: Town of Farmville Support Services Director

Appendix C:

Grease Interceptor Inspection Form

Town of Farmville
FOG Program – Grease Interceptor Inspection Form

Date: _____ Time: _____

Inspector: _____

Site Information

Food Handling Facility: _____

Location: ----------

_____

_____

Contact Name: _____ Title: _____

Phone: (____) _____

Interceptor Inspection

Last Date of Inspection: _____

1. Interceptor location: _____
   (sketch on back)
2. Interceptor type: _____
3. Interceptor size: _____ gallons,

   Dimensions (L X W) _____

   Trap: _____lb _____ gpm
4. Access manholes in place: Y / N
5. Sample tee / sample point on interceptor: Y / N

	1st Compartment	2nd Compartment	3rd Compartment
Grease Cap = >	in / ft	In / ft	In / ft
Solids Depth = >	In / ft	In / ft	In / ft

Observations/Comments: _____

_____

_____

Interceptor Sampling

Interceptor Sampled: Y / N Date: _____ Time: _____

Sample ID: _____ Sample Type: Grab / Composite

PH: _____ Temperature: _____

Fats/Grease/Oil Removal

1. Contracted company (grease removal): _____
2. Date of Last Service: _____
3. Pumping Frequency: _____
4. Records kept of interceptor service: Y / N

Violation: Y / N Type: _____

Cause of Violation: _____

Appendix D:

Grease Removal Device Maintenance Log

Grease Removal Device Maintenance Log
Town of Farmville

Food Handling Facility _____

Name Address: _____

_____

_____

Telephone: _____

Year _____

Date	Waste Hauler	Waste Processor (Destination)	Grease/Solids Depth* (% of Normal Liquid Depth)	Total Gallons Pumped Out (Indicate for Every Cleaning event	Maintenance/ Management Suggestions	**Actions Taken**

Appendix E:

Grease Interceptor Variance Request Form

Grease Interceptor Variance Request
Town of Farmville

Date: _____

Food Handling Facility:

Facility Name: _____

Facility Mailing Address _____

_____

_____

Company Name: _____

Company Address: _____
(If different from above)

_____

_____

Contact/Title : _____

Telephone: _____

A variance is to provide specific exceptions to the Fats, Oils and Grease (FOG) program of the Town of Farmville, NC. Said variance is intended to give food handling facilities an avenue to provide substantial evidence to modify FOG program requirements while meeting the intent of the Town of Farmville Sewer Use Ordinance/FOG Control Ordinance. If the variance request is approved and modifications are granted, all other requirements of the Sewer Use Ordinance/FOG Control Ordinance, and any other requirements, remain in effect.

I understand that if a variance request is approved and substantial changes are later made in terms of food service (menu or production), seating capacity, or handling procedures, the variance may become void. I also understand that if this facility does not comply with all conditions of approval that may be made in granting this variance request, or if the Town subsequently obtains evidence that excessive FOG is entering the sanitary sewer collection system for this facility or contributes to a sanitary sewer overflow, the variance may become void. Fees for sampling and laboratory analyses, if required, are in addition to the Variance Application Fee.

In completing this Variance Request, I certify under penalty of law that this document and all attachments were prepared under my direction or my supervision of qualified personnel. To the best of my knowledge, the information submitted herein is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fines or imprisonment for knowing violations.

Grease Interceptor Variance Request
Town of Farmville

1. Written explanation for the need to vary from the Town of Farmville's FOG Program. (Separate Letter may be attached)

2. Food Handling facility's hours of operation:

   Monday _____ Tuesday _____ Wednesday _____ Thursday _____

   Friday _____ Saturday _____ Sunday _____

   If seasonal, identify months of operation: _____

3. Provide information on Grease Separation Device(s): (Attach additional sheet(s) in necessary):

   Location: _____

   Size (Capacity): _____

   Manufacturer: _____

   Model #: _____

   Location: _____

   Size (Capacity): _____

   Manufacturer: _____

   Model #: _____

   Location: _____

   Size (Capacity): _____

Manufacturer: _____

Model #: _____

4. Provide Maintenance/Service Information:

   Frequency of Service: _____

   Briefly describe how maintenance will be conducted:

   _____

   _____

   _____

   _____

   Who conducts service? _____

   Grease Hauler:

   Name: _____

   Contact: _____

   Phone: _____

5. List all major equipment used for food preparation (i.e. grills, fryers, woks, etc. – include sizes/capacities if applicable).

   _____

   _____

   _____

6. Total Seating Capacity: _____

7. Does your establishment ever utilize catering or off-site food preparation companies to provide meals:

   YES or NO (Circle)

   If yes, are any of the kitchen sink fixtures used to wash soiled dishes?

   YES or NO (Circle)

8. Provide an up-to-date copy of the indoor and outdoor plumbing plans including facility sewer connection, floor drains, grease removal equipment, sinks, restrooms, etc. (Blue prints are acceptable or a hand drawn sketch to scale may be acceptable in some cases.)

9. Submit a copy of the food service menu. (Breakfast, lunch, dinner, snacks, etc.)

10. Is all food served on paper plates? (Plates do not need to be washed.)

YES or NO (Circle)

11. List kitchen fixture locations, intended use, number of compartments (i.e. Pre-rinse, 1-2-3-4 compartment wash sinks, prep sinks, dishwasher, garbage disposal, etc.)

Location	Intended Use (Ex. Wash, prep, prerinse)	# of Compartment (ex. 1,2,3, 4)
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Reviewed by the Town of Farmville

Name/Title: _____ Date: _____

Department: _____

Variance Request is: _____ Approved _____ Denied _____ Requires a Variance Study

If approved, the Town of Farmville allows the following specific exception(s) to the GOG Program

With the following conditions (use additional pages if necessary):