

DAVIDSON COUNTY PUBLIC SERVICES



Dear Food Service Manager:

Davidson County implemented a Fats, Oils, and Grease (FOG) Program in February 2009 as a measure to reduce the amount of fats, oils, and grease entering the County wastewater collection system. This program, which is required by federal and state regulations, is intended to prevent sewer system back-ups, blockages and sewer spills.

All Food Service Establishments connected to the Davidson County collection system are required to properly install, operate and maintain grease interceptors which remove fats, oils and grease from the waste stream and prevent the release of these materials into the public wastewater system. This program applies to all businesses and institutions with commercial kitchens including restaurants, motels, bakeries, delicatessens, hotels, schools, grocery stores, convenience stores, and other businesses engaged in commercial food preparation.

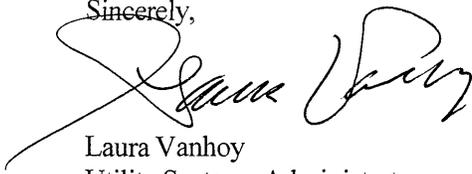
A major component of the program is the requirement that food service establishments must have grease interceptors pumped out as often as necessary to prevent the discharge of fats, oils, and grease into the public wastewater system. The County recommends that grease interceptors be pumped at least once every ninety (90) days, with the requirement that more frequent cleanings may be necessary to maintain the grease interceptor in proper working condition. Records of regular interceptor cleaning and repairs shall be maintained at each establishment.

Included in this packet are materials to help you and your employees understand and comply with the FOG Program:

- ✓ A copy of the FOG Program
- ✓ A list of State-permitted grease/septage haulers
- ✓ A copy of the Grease Interceptor Maintenance Log that must be kept current
- ✓ A list of Davidson County FOG Program contacts
- ✓ A Fact Sheet of Best Management Practices for Fats, Oils, & Grease (NCDENR)

Please review the attached materials to familiarize yourself with the program. If you have questions concerning the County's FOG Program, please contact me at (336) 236-3120. Your efforts to prevent sewer blockages and spills are appreciated.

Sincerely,



Laura Vanhoy
Utility Systems Administrator

**Davidson County
Fats, Oils and Grease (FOG) Control Program**

Table of Contents	Page
I. Introduction	2
II. Definitions	3
III. Ordinance	4
IV. FOG Program	
A. Approval Process	12
B. Installation Requirements for Grease Interceptors	13
C. Maintenance of Grease Control Devices	13
D. Record keeping	13
G. Responsibility of Food Service Establishments	14
H. Waiver	14
I. Inspections and Enforcement	14
J. Appeals	14
V. Appendix	15

I. Introduction

What is FOG?

FOG is the acronym for **Fats, Oils, and Grease**.

Grease is the common term for animal fats and vegetable oils. Animal fats and vegetable oils are lipids. Lipids are organic molecules essential to animal life for the production of hormones and energy storage. If a lipid is liquid at room temperature, it is usually referred to as an oil. If it is solid at room temperature, the lipid is referred to as a fat or grease.

Animal fats and vegetable oils are 8 – 12 percent lighter than water and do not mix with water. FOG forms a floating layer on the water that enables free-floating fats and oils to be easily removed by grease separation devices. Fats, oils & grease (FOG) comes from a wide range of residential, commercial and industrial sources.

Residences, apartment complexes, restaurants, school cafeterias, day care facilities, grocery stores, bakeries, hospitals, churches, correctional institutions, airports and food processing plants are all FOG sources. FOG is a natural consequence of cooking and occurs naturally in many foods such as meat. Oil and grease are also ingredients of breads, salads and desserts and are used as a medium for frying food.

Why is FOG a Problem?

FOG discharged by residential, commercial, institutional and industrial users present a significant problem for wastewater collection and treatment systems. FOG can block sewer lines and accumulate in lift stations, causing sanitary system overflows (SSO's) which can cause harm to the natural environment, threaten the public health, and increase wastewater system operating costs.

What is the FOG Program?

The County's FOG Program was developed to prevent the introduction of fats, oils and grease into the public wastewater system. The educational portion of the program is designed to deter residential and non-residential customers from pouring FOG down kitchen sinks and into building drains. The regulatory party of the program requires the commercial and institutional users to properly install, operate and maintain FOG control devices.

The program will help food service establishments manage the discharge of FOG in a safe and effective way and protect private and public sewer lines from harmful blockages. The program requires all food service establishments to operate and maintain a properly-sized grease control device at their own expense. Grease control devices are designed to collect grease, oil, solids, and other debris and prevent these materials from entering the waste stream. FOG control devices are emptied by septage haulers on a regular basis and the materials are disposed of properly.

As a result of the increasing number of sanitary sewer overflows caused by FOG each year, the NC Division of Water Quality has developed new requirements, including the development of a FOG control enforcement and education program, for public entities that operate collection systems. The requirements are included in the Wastewater Collection System Permit Number WQCS00361 issued to Davidson County by the Department of Environment and Natural Resources (DENR).

II. Definitions

Best Management Practices (BMPs) - Practices such as preventive maintenance, scheduling of activities or process alterations which enable the user to comply with the provisions of this policy or any applicable state and/or federal guidelines.

County - Davidson County, North Carolina, or any duly authorized agent(s) or official(s) acting on behalf of the county.

Director - The Davidson County manager or the person designated by the county to supervise the operation of the county's wastewater collection and treatment system or his authorized representative(s).

Grease Interceptor/Trap - A pretreatment device designed and installed to separate fats, oils and grease from wastewater.

Industrial wastewater - All water-carried wastes and wastewater excluding domestic wastewater and unpolluted water. Includes all wastewater from any producing, manufacturing, processing, institutional, commercial, agricultural and/or other operations where the wastewater discharged includes wastes of nonhuman origin.

Oil and grease - Any material (animal, vegetable or hydrocarbon) which is extractable from an acidified sample of a waste by freon or other designated solvents and as determined by the appropriate standard procedure.

Animal/vegetable- That oil and grease apart from that differentiated by method 502 E of the 17th Edition, Standard of Methods for Examination of Water and Wastewater.

Hydrocarbon oil/grease- That oil and grease differentiated by method 502 E of the 17th Edition, Standard Methods for the Examination of Water and Wastewater.

Person - Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity or any other legal entity or their legal representatives, agents or assigns. This definition includes all federal, state and local government entities.

Policy -The Davidson County Sewerage System Policy.

POTW – Publicly owned treatment works, which means a treatment works as defined by Section 212 of the Federal Clean Water Act (CWA), which is owned by a State or local government entity. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW treatment plant.

Pretreatment or treatment - The reduction of the amount of pollutants, the elimination of pollutants or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollution into a POTW. The reduction or alteration can be obtained by physical, chemical or biological processes or a process changes or other means, except by diluting the concentration of the pollutants unless allowed by an applicable pretreatment standard.

Sanitary sewer - A pipe or conduit which carries domestic waste and/or industrial wastes and to which storm, surface, ground waters and unpolluted waters are not intentionally admitted.

User - An individual, establishment or industry using any part of the sewer system.

III. Ordinance

The Davidson County Sewerage System Policy was incorporated into the Table of Special Ordinances of Davidson County by reference on September 9, 2008. The Policy regulates wastewater discharges received by the Davidson County wastewater collection system and provides enforcement authority to the County concerning all discharges received into the collection system. The sections provided below are the portions of the Policy which apply specifically to the control of Fats, Oils, and Grease (FOG).

Sec. 46. Damage and tampering prohibition.

It shall be unlawful for any person to:

- (3) Place or cause to be placed in any manhole or sewer pipe or main any material which results, or is likely to result, in the stopping or obstructing of the normal flow of sewage or wastes.

Sec. 48. Specific pollutant limitations.

(a) Specific prohibitions. No user shall contribute or cause to be contributed into the POTW the following pollutants, substances or wastewater:

- (2) Wastes which limit the hydraulic capacity of county sewers and associated equipment and structures, such as grease, garbage with particles greater than one-fourth (1/4) inch in any dimension, animal guts or tissues, paunch manure, bones, hair, hides or fleshings, whole blood, feathers, ashes, cinders, sand, spent lime, stone or marble dust, metal, glass, straw, shavings, grass clippings, rags, spent grains, spent hops, waste paper, wood, plastics, gas, tar, paint, lacquer, varnish, asphalt residues, residues from refining or processing of fuel or lubricating oil, mud, solid or viscous pollutants or glass grinding or polishing wastes.

- (13) Wastes containing waxes, greases or oils which may solidify or become viscous at temperatures between thirty-two (32) degrees Fahrenheit (zero (0) degrees Celsius) and one hundred forty (140) degrees Fahrenheit (sixty (60) degrees Celsius). Fats, oils, greases or waxes which are free floating shall not be discharged into the sewer system. Fats, oils and greases shall not be discharged to the sewer system if their concentration and physical dispersion results in separation and adherence of such materials to said structures, or if such materials cause blockage in the sewer system, then such materials must be removed prior to discharge into the sewer system.

(f) Pretreatment of wastewater.

- (1) Users shall provide wastewater treatment as necessary to comply with this policy and wastewater permits issued under Section 58 of this policy and shall achieve compliance with all national categorical pretreatment standards, local limits and the prohibitions set out in Sections 47 and 48 of this policy within the time limitations as specified by EPA, the state, or the director, whichever is most stringent. Any facilities necessary for compliance shall be provided, operated and maintained at the user's expense. Detailed plans showing the pretreatment facilities and operating procedures shall be submitted to the county for review and shall be approved by the director before construction of the facility. The review of such plans and operating procedures shall in no way relieve the user from the responsibility of modifying the facility as necessary to produce an effluent acceptable to the county under the provisions of this policy. Any subsequent changes in the pretreatment facilities or

method of operation shall be reported to and be approved by the director prior to the user's initiation of the changes.

(2) Additional pretreatment measures.

- c. Grease, oil and sand interceptors shall be provided when, in the opinion of the director, they are necessary for the proper handling of wastewater containing excessive amounts of grease and oil or sand. All interception units shall be of type and capacity approved by the director and shall be so 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.

Sec. 61. Monitoring and sampling by county.

(a) Regulations. The county may inspect or monitor the effluent source or treatment facilities of any user to ascertain whether the purpose and requirements of this policy are being met.

(2) The county 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. County equipment which is set up on a user's property may not be handled or tampered with, as provided for in Section 46.

(4) The county, state or EPA shall have a right of entry to, upon or through any premises in which an effluent source is located or in which any discharge records are located. The county shall also have access to review and be able to copy any data pertaining to the user's effluent discharges, inspect any monitoring equipment or method and sample any discharges coming into the sanitary sewer system.

(5) Where a user has security measures in force 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 and vehicles from the county will be permitted to enter without delay for purposes of performing their specific responsibilities.

(6) Search warrants. If the director, approval authority or EPA has been refused access to a building, structure or property, or any part thereof, and is able to demonstrate probable cause to believe that there may be a violation of this policy, or that there is a need to inspect and/or sample as part of a routine inspection and sampling program of the county designed to verify compliance with this policy or any permit or order issued hereunder, or to protect the overall public health, safety and welfare of the community, then the director, approval authority or EPA may seek issuance of a search warrant.

(8) While performing the necessary work on private properties, the authorized county representatives shall observe all safety rules applicable to the premises as established by the company. The county shall indemnify the company against loss or damage to its property by county employees. The county shall also indemnify the company against liability claims for personal injury or property damage asserted against the company resulting from the county's inspection or sampling operations. An exception to this would be as such may be caused by negligence or failure of the company to maintain safe conditions in connection with monitoring or inspection sites.

Sec. 62. Pretreatment of industrial wastewaters.

(a) An industrial wastewater pretreatment system or device may be required by the director to pretreat industrial wastewater prior to discharge into the sewer system. Any person who is prohibited from discharging a substance as specified in these regulations, or who is required to provide pretreatment under federal pretreatment standards and requirements shall have the sole responsibility to devise, at his own expense, the methods for eliminating the problem so as to make any waste discharge eligible for a permit and for compliance with this policy and federal regulations.

(d) Grease, oil and sand interceptors shall be provided, when deemed necessary by the director, for the proper handling of liquid wastes containing grease in excessive amounts, sand or other harmful ingredients. All interceptors shall comply with all applicable local and state plumbing codes and be acceptable to the director and shall be located as to be readily accessible for cleaning and inspection. All interceptors shall comply with the following provisions:

(1) General requirements:

- a. All interceptors shall be designed so that they will not become air bound or permit siphonage and shall be equipped with a flow control fitting with external cleaning devices.
- b. All traps shall be properly vented and a fresh air inlet or vent shall be installed on the house side of the interceptor. The outlet of the interceptor shall have a vacuum breaker or vent.

(2) Oil and grease interceptors:

- a. An approved interceptor shall be installed in the drainage system of the building or premises of the following uses or occupancies unless its omission is approved by the director: Restaurants, public eating places, food preparation at institutions, and schools, all wastes in meat preparation areas, pot sinks, dishwashing machines, can washers, commercial garages, repair shops, service stations, trucking docks, laundries and any other places whose wastes would be expected to contain oil or grease.
- b. Interceptors shall be so constructed as to be oil tight and shall have easily removable water-tight and/or gastight covers as required.
- c. Every interceptor shall have a vent not less than two (2) inches in diameter, connected to the interceptor tank to relieve vapor and terminated in an approved manner.

Sec. 63. Employee notification of regulations.

In order that users' employees be informed of county requirements, users shall make available to their employees copies of this policy together with such other wastewater information and notices as furnished by the county which are directed toward improving water pollution control.

Sec. 71. Criteria constituting a violation.

(a) A user shall be considered in violation when guilty of any of the following, regardless of intent or accident:

- (1) Violation of the conditions of these policies or applicable state and federal

regulations.

- (2) Violation of the conditions of any permit herein described.
- (3) Failure to factually report discharge characteristics.
- (4) Failure to submit any required reports in the prescribed time period.
- (5) Refusal of access to user premises for inspection or monitoring:
- (6) Failure to pay any fees, charges or surcharges.
- (7) Tampering with any monitoring device or method which knowingly results in inaccuracy.

(b) Each day during which any violation continues shall constitute a separate violation.

Sec. 72. Actions following a violation.

(a) Notification of industrial user violation. A reasonable effort shall be made by the county to notify the violating party. Written notification shall be sent to the authorized representative, entitled "Notice of Violation" and specifying the nature and source of the violation. Following this notification, follow-up determinations will be used to establish penalties as provided by Section 73 and/or corrective action to be taken by the violator. Where repetitive violations are occurring and the user is using best efforts and best management practices as determined by the director to avoid further failures or violations, the director may allow a reasonable time for satisfactory correction thereof. Depending upon the severity of the situation, the director may require disposal of the industrial waste in some manner other than into the sanitary sewer at the expense of the user. The user shall, within the period of time specified in the notification, satisfactorily correct said failure or violation. Extensions of this time limit may be granted by the director upon consideration of a written request by said user, which shall set forth the truthful reasons why compliance cannot be timely made. Corrections of violation conditions shall not preclude assessment of penalties.

(b) Consent orders. The director is hereby empowered to enter into consent orders, assurances of voluntary compliance, or other similar documents establishing an agreement with the person responsible for the noncompliance. Such orders will include specific action to be taken by the discharger to correct the noncompliance within a time period also specified by the order. Consent orders shall have the same force and effect as an administrative order issued pursuant to Section 72(c) below.

(c) Administrative orders. When the director finds that an industrial user has violated or continues to violate this policy, permits or orders issued hereunder, or any other pretreatment requirement, the director may issue an order to cease and desist all such violations and direct those persons in noncompliance to do any of the following:

- (1) Immediately comply with all requirements;
- (2) Comply in accordance with a compliance time schedule set forth in the order;
- (3) Take appropriate remedial or preventive action in the event of a continuing or threatened violation;
- (4) Disconnect unless adequate treatment facilities, devices or other related appurtenances are installed and properly operated within a specified time period.

(d) Show cause hearing. The county may order any violator to show cause why the proposed enforcement action should not be taken. When the commissioners order the hearing, a notice shall

be served on the user specifying the time and place of a hearing regarding the violation, the reasons why the action is to be taken and the proposed enforcement action and a request that the user show cause why this proposed enforcement action should not be taken. The notice of the hearing shall be served personally or by registered or certified mail (return receipt requested). Service may be made on any agent or officer of a corporation.

For the user to request the hearing, a written request shall be filed with the director of public works within twenty (20) days of receipt of the notification of the enforcement action. The request shall specify why the action against the user should not have been taken, and/or the reasons why the enforcement action should be revised. The user shall be notified of the hearing date, time and place in writing.

After reviewing the evidence presented at the show cause hearing, the director shall render his/her decision, which may include, but is not limited to, issuing an order that the sewer service be discontinued if abatement is not achieved in a specified time period, and/or recommend to the county commissioners that fines be imposed as authorized by Section 73(c).

A show cause hearing under this section is not a prerequisite to the assessment of a civil penalty under Section 73(d) nor is any action or inaction taken by the director under this section subject to an administrative appeal under Section 58(g).

(e) Appeal. Users that disagree with decisions made by the director can appeal by filing a written request within ten (10) days of such decision to the county clerk to the Board. If the user disagrees with the director's decision and files as stated above, the user's situation will be decided upon by a committee composed of the commissioner members. The committee members will be chosen by the commissioner's chairman. The committee composed of the commissioner members will make a formal report to the full Board of Commissioners of its findings and decision on the user's appeal. The committee's decision shall be final. Fines or penalties approved by the county commissioners are not subject to appeal.

Sec. 73. Penalties.

(a) Sewer service discontinuation. The county may suspend sewer service to any user when such a suspension is necessary in the opinion of the county, to stop an actual or threatened discharge which presents or may present an imminent or substantial endangerment to the health or welfare of persons, to the environment, causes interference to the POTW or its residuals disposal methods, or may cause the county to violate any conditions of the applicable NPDES permit. Any person notified of a suspension of sewer service shall immediately cease discharge of all wastewater. In the event of a failure of the person to comply voluntarily with the suspension order, the county shall take such steps as deemed necessary, including immediate severance of the sewer connection, to prevent or minimize damage to the POTW or endangerment to health or the environment.

The county may reinstate sewer service upon proof of the elimination of the discharge which caused the violation. A detailed written statement by the user shall be submitted within fifteen (15) days of the date of notification of the violation. This statement shall describe the causes of the harmful contribution and the measures taken to prevent any future occurrence. Reinstatement of sewer service may also require the posting of a compliance bond by the user. This compliance bond shall be in an amount estimated to be the cost of complying with this policy, said bond being conditioned upon the faithful performance of the provisions of the policy and being in a form approved by the county attorney. The violator shall also make immediate repayment for all damages incurred by the discharge and for any sampling and analysis done in connection with the discharge.

(c) Fines and expense fees.

(1) A special fine of not more than ten thousand dollars (\$10,000.00) per violation

may be assessed. The director shall consider the following in assessing the fine.

- a. The degree and extent of the harm to the natural resources, to the public health, or to public or private property resulting from the violation;
- b. The duration and gravity of the violation;
- c. The effect on ground or surface water quantity or quality or on air quality or other environmental impacts;
- d. Reason for the violation;
- e. The amount of money saved by noncompliance;
- f. Whether the violation was committed willfully or intentionally;
- g. The prior record of the violator in complying or failing to comply with the pretreatment program;
- h. The response of the industrial user with regard to the violation (e.g. notification to POTW, attempts to stop, remedy or minimize the problem);
- i. Subsequent industrial user action so that similar problems do not recur;

(2) Violators will be assessed the costs incurred by the county resulting from:

- a. Investigative costs;
- b. Enforcement costs;
- c. Fines and expenses associated with violations of county held permits (including fish kills and other environmental impacts);
- d. Terminating or revoking a permit;
- e. Severance of the sewer connections.

(3) Violators will also be assessed the cost to rectify the damage and the cost of the work required to clear and/or repair any part of the system affected by the discharge violation.

(4) Full payment of all fines and fees shall be made by the user before issuance of a new permit or reconnection to the sewer system.

(5) Assessments for both fines and regular service charges shall be paid within thirty (30) days after invoice. If a payment is not made within the allotted time, the county may levy an additional late charge of ten (10) per cent of the amount due.

(6) Fines and penalties assessed under this policy and not paid within the prescribed period of time may be collected in a civil action pursuant to N.C.G.S. 160 A175(c). In addition, the county may seek criminal prosecution for a violation of this policy, which shall constitute a misdemeanor as provided for in N.C.G.S. 160 A176(c).

In addition to the penalties provided herein, the county may recover reasonable attorney's fees, court costs, court reporters' fees and other expenses of litigation by appropriate suit at law against the person found to have been in violation.

(d) Civil penalties.

(1) Any user who is found to have failed to comply with any provisions of this policy, or the orders, rules, regulations and permits issued hereunder, may be fined up to ten thousand dollars (\$10,000) per day per violation.

(2) In determining the amount of the civil penalty, the director shall consider the following:

- a. The degree and extent of the harm to the natural resources, to the public health, or to public or private property resulting from the violation;
- b. The duration and gravity of the violation.
- c. The effect on ground or surface water quantity or quality or on air quality;
- d. The cost of rectifying the damage;
- e. The amount of money saved by noncompliance;
- f. Whether the violation was committed willfully or intentionally;
- g. The prior record of the violator in complying or failing to comply with the pretreatment program;

(3) Appeals of civil penalties assessed in accordance with this section shall be as provided in Section 72(e).

(e) Other available remedies. Remedies, in addition to those previously mentioned in this policy, are available to the director who may use any single one or combination against a noncompliant user. Additional available remedies include, but are not limited to:

(1) Criminal violations.

The district attorney may, at the request of the county, prosecute noncompliant users who violate the provisions of N.C.G.S. 143-215.6B, which states it is a crime to negligently violate any term, condition or requirement of a pretreatment permit, or negligently fail to apply for a pretreatment permit, issued by local governments (G.S. 143-215.6B(f), to knowingly and willfully violate any term, condition, or requirement of a pretreatment permit, or knowingly and willfully fail to apply for a pretreatment permit, issued by local governments (G.S. 143-215.6B(g), to knowingly violate any term, condition, or requirement of a pretreatment permit issued by local governments, or knowingly fail to apply for a pretreatment permit, knowing at the time that a person is placed in imminent danger of death or serious bodily injury, (G.S. 143-215.6B(h), and to falsify information required under Article 21 of Chapter 143 of the General Statutes (G.S. 143-215.6B(I).

(2) Injunctive relief. Whenever a user is in violation of the provisions of this policy or an order or permit issued hereunder, the director, through the county attorney, may petition the Superior Court of Justice for the issuance of a restraining order or a

preliminary and permanent injunction which restrains or compels the activities in question.

(3) Public nuisances. Any violation of the prohibitions or effluent limitations of this policy or of a permit or order issued hereunder, is hereby declared a public nuisance and shall be corrected or abated as directed by the director. Any person(s) creating a public nuisance shall be subject to the provisions of the county code governing such nuisances.

(f) Remedies nonexclusive. The remedies provided for in this policy are not exclusive. The director may take any, all, or any combination of these actions against a noncompliant user. Enforcement of pretreatment violations will generally be in accordance with the county's enforcement response plan. However, the director may take other action against any user when the circumstances warrant. Further, the director is empowered to take multiple and escalated enforcement action(s) against any noncompliant user.

IV. FOG Program

A. Approval Process

1. New Construction

All new construction shall be inspected and approved by the Davidson County Inspections Department for compliance with NC State Building Code/Plumbing Code, which is the most current edition and applies at the time of submittal.

For all new non-residential facilities in which the production of fats, oils or grease are anticipated and may be discharged to the County's public wastewater collection system, plans and supporting documents containing information specific to the kitchen fixtures; building drains; the private sanitary sewer system; and the location, performance, and configuration of grease interceptors shall also be provided to the director of the public collection system for review and consideration.

The Davidson County Public Services and Inspections Departments shall review the plans and associated information and provide recommendation to the director. The director shall have the authority to require such wastewater pretreatment and other improvements as he/she deems necessary to protect the public collection system and prevent potential environmental impacts and public health threats resulting from sanitary sewer overflows attributed to fats, oils, and grease.

For all food service establishments; public eating places; institutional and school cafeterias; butcher shops and shops with meat preparation facilities; commercial kitchens; and commercial or industrial facilities with pot sinks, commercial dishwashing equipment, can washes, etc... a properly designed grease interceptor shall be installed in the drainage system of the facility, unless a waiver is granted by the director to the user for the specific operation in question.

A waiver may be issued only in cases where the director is satisfied that the public wastewater collection system will not be adversely impacted by the proposed wastewater discharge received from the specific operation and the Davidson County plumbing inspector provides approval of the waiver as permitted in the applicable NC Plumbing Code.

2. Existing Facilities

Existing facilities shall be subject to the same process of review as new facilities. All potential users requesting zoning compliance permitting, plumbing permits for building plumbing modifications/renovations, and/or changes to sanitary sewer service ownership/occupancy that are, or will be, connected to the Davidson County collection system, for which the production and discharge of fats, oils, and grease are anticipated, shall submit the appropriate plans and supporting information to the director and Inspections Department for review. No final inspection approvals shall be issued by Inspections nor shall any wastewater discharges from the user's facility be authorized until grease control devices or other wastewater improvements are inspected and approved for the operation in question.

In cases where a non-residential user is determined to have caused/or is likely to cause the discharge of fats, oil, and grease and a grease control device has not been reviewed and approved by the director and/or Inspections Department or existing grease control device(s) are releasing FOG to the public collection system, the user shall be notified by the director that grease control devices for the facility may be required and that detailed information concerning the operation and wastewater discharge shall be submitted to the director for review within 30 days of such notice. If the user does not respond within the time specified by the director or refuses to install grease control devices within the time specified and as required by the director, the user shall be

subject to the remedies provided within the Davidson County Sewerage System Policy which may include, but may not be limited to, fines and penalties as provided in Section 73 of the Policy and severance of the user's sewer service connection.

B. Installation Requirements for Grease Interceptors

All grease control devices shall be properly sealed to prevent inflow and infiltration, be properly vented (2" diameter vent minimum), and shall be located as to be readily accessible for cleaning and inspection. Grease interceptors are to be kept free from obstructions that would hinder or prevent inspection and/or maintenance activities at all times. Obstructions include, but are not limited to vehicles, dumpsters, waste oil bins, landscaping plants, and stored supplies.

All such grease control devices shall be designed to adequately prevent the discharge of fats, oils, and grease from entering the public wastewater system. Unless Plumbing Code provides more stringent standards, the interceptor recommended for use by food service establishments should be properly vented, complete with a baffle separating influent and effluent chambers, and provided with both inlet and outlet tees.

C. Maintenance of Grease Control Devices

Grease control devices shall be inspected, cleaned and repaired regularly, as needed, by the user at the user's expense. A cleaning frequency which prevents fats, oils, grease, and solids from being released from each grease control device is that which is required.

It is recommended that each grease interceptor be cleaned no less than once every ninety (90) days, but may be necessary more often depending upon the number and type of fixtures and materials contributing to the loading of the grease control device. The use of enzymes, grease solvents, thermal sources, emulsifiers, etc... are not considered acceptable grease interceptor maintenance practices and shall not be used as an alternative to the pumping of a grease interceptor.

All waste removed from each grease interceptor shall be disposed of at a facility permitted by the NC Division of Solid Waste Management to receive such waste. No grease interceptor waste shall be discharged to the County's wastewater collection system.

A list of available State-permitted grease haulers is provided in the Appendix.

D. Record keeping

User's who are required to install and maintain grease control devices shall also maintain records of the scheduled and unscheduled maintenance of the device(s). To verify compliance with County wastewater restrictions, these records must be updated during maintenance activities and kept on file for County inspections.

Records of grease interceptor maintenance shall include the following information: food service establishment (FSE) name and physical location; date and time of grease interceptor service; description of grease interceptor service activity; name, permit number and city of origin of grease interceptor service company; size of each grease interceptor serviced and normal cleaning frequency; volume of waste removed from each grease interceptor; and the signature and date of FSE personnel confirming service completion. It is recommended that a facility keep grease control device maintenance records on file for no less than two years for County inspection. A blank interceptor maintenance log for use by food service establishments is included in the Appendix.

E. Responsibility of Food Service Establishments

Food service establishments (FSE) are responsible for the proper operation and maintenance of the grease control devices, as well as the proper training of their staff to prevent the discharge of unnecessary fats, oils and grease into the waste stream. Staff shall be adequately trained and shall be aware of County requirements to prevent fats, oils, and grease from entering building drains, as well as keep the proper records of grease interceptor maintenance.

FSE owners & management shall keep the Davidson County Fats, Oils, And Grease (FOG) Program posted in an area that is readily accessible and visible to employees with the grease interceptor maintenance log. Orientation of all employees shall include review of the County FOG Program and record keeping forms. The County will provide training and/or educational materials regarding FOG management from time to time. These materials are considered part of the County's FOG Program and shall be distributed to all employees.

F. Waiver

Grease control devices shall be reviewed and approved by the director for the user and specific operations identified. Waivers for grease control devices shall be granted only in cases where the user can prove to the satisfaction of the director that the public wastewater collection system will not be adversely impacted by the proposed wastewater discharge received and the Davidson County plumbing inspector provides approval of the waiver as permitted in the applicable Plumbing Code.

G. Inspections and Enforcement

The County may conduct mandatory inspections of every food service establishment and food preparation facility connected to the public wastewater collection system, and at other times as the County deems necessary. If grease is responsible for a sewer blockage, all Food Service Establishments upstream from the blockage will be inspected to determine the source.

Enforcement shall be undertaken as provided in Section 72 of the Sewerage System Policy. Penalties may be assessed for violations as prescribed in Section 73 of the Policy. Fines, penalties and other costs to be recovered may consist of, but may not be limited to, up to \$10,000 per day (each day of noncompliance constitutes a separate violation), the costs of cleaning and repairing the affected portion of the public collection system, attorney's fees and administrative costs, penalties assessed by agencies for noncompliance with wastewater system permits and environmental impacts, civil and criminal penalties, and severance of the user's sewer service connection.

H. Appeals

Users who disagree with enforcement decisions made by the director can appeal by filing a written request within ten (10) days of such decision to the county clerk to the Board. If the user disagrees with the director's decision and files as stated above, the user's situation will be decided upon by a committee composed of the commissioner members. The committee members will be chosen by the commissioner's chairman. The committee composed of the commissioner members will make a formal report to the full Board of Commissioners of its findings and decision on the user's appeal. Fines or penalties approved by the county commissioners are final and are not subject to appeal.

State-Permitted Septage Management Firms

Davidson County's Fats, Oils, and Grease (FOG) Program requires that owners and operators of restaurants and food preparation facilities connecting the County's public wastewater system clean grease control devices as frequently as necessary to prevent the discharge of FOG into the public collection system. As an owner/operator, you are responsible for grease disposal from your facility.

In accordance with North Carolina regulations, only properly permitted entities are authorized to pump, transport, store, treat, or dispose of grease septage. To verify that your grease hauler is permitted, you can request to see their state permit.

Davidson County does not endorse or recommend any of the companies provided below; the information is provided for your convenience.

B&B Septic Tank
706 Ed Richard Road
Lexington, NC 27295
Benny Shoaf
(336) 752-2099

Jetco Pumping Svc.
1188 Tremont Drive
Rural Hall, NC 27045
Kevin Redmond
(336) 766-0880

Sprinkle Pumping Svc.
4910 Murray Road
Winston-Salem, NC
Danny Sprinkle
(336) 924-8677

Carolina Septic, Inc.
213 Berry Garden Road
Kernersville, NC 27284
Richard Elmore
(336) 595-3470

Piedmont Disposal
353 Jonestown Road #321
Winston-Salem, NC 27104
Kevin Long
(336) 777-8805

Transou's Forsyth Septic Tank Svc.
5674 Hampton Road
Clemmons, NC 27012
David Redmond
(336) 765-1161

Carolina By-Products
2410 Randolph Avenue
Greensboro, NC 27406
Charlie Cheek
(336) 333-3030

Celestial Septic
7795 Dusty Trail
Germantown, NC 27019
Blake Frazier
(336) 577-3370

Affordable Septic & Grease Pumping
260 Grade Street
Rural Hall, NC 27045
Tommy Neal
(336) 377-2534

Forsyth Rooter Service
2960 Griffith Road
Winston-Salem, NC
Steve Newsom
(336) 768-8494

Root 24 Pumping
895 Calindia Way
Lewisville, NC 27023
Paul Grabovich
(336) 945-0166

Handy Man Service, Inc.
8901 Butner Road
Tobaccoville, NC 27050
Larry Martin
(336) 983-5595

If you need additional information, please contact:

Laura Vanhoy
Davidson County
Public Services
(336) 236-3120
(336) 236-7518 fax

Davidson County
Fats, Oils & Grease Program Contacts

Public Services Department

P.O. Box 1067
Lexington, NC 27293
Telephone: (336) 242-2925

Laura Vanhoy
Utility Systems Administrator
Telephone: (336) 236-3120
Fax: (336) 236-7518

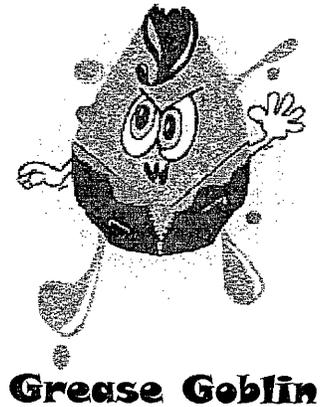
Jerry Kennedy
Wastewater Operator
in Responsible Charge (ORC)
Telephone: (336) 239-0149

Inspections Department

P.O. Box 1067
Lexington, NC 27293
Telephone (336) 242-2230

Beau Chollett
Davidson County Plans Examiner
Telephone: (336) 242-2239
Fax: (336) 249-9703

A FACT SHEET FOR Best Management Practices for Fats, Oils, and Grease



Residual fats, oils, and grease (FOG) are by-products that food service establishments must constantly manage. Typically, FOG enter a facility's plumbing system from ware washing, floor cleaning, and equipment sanitation. Sanitary sewer systems are neither designed nor equipped to handle the FOG that accumulates on the interior of the municipal sewer collection system pipes. Over 30% of North Carolina's 1999 sanitary sewer overflows were the result of pipe blockages from FOG accumulation from residential, institutional and commercial sources. The best way to manage FOG is to keep the material out of the plumbing systems. The following are suggestions for proper FOG management.

Dry Clean-Up

Practice dry cleanup. Remove food waste with "dry" methods such as scraping, wiping, or sweeping before using "wet" methods that use water. Wet methods typically wash the water and waste materials into the drains where it eventually collects on the interior walls of the drainage pipes. Do not pour grease, fats or oils from cooking down the drain and do not use the sinks to dispose of food scraps. Likewise it is important to educate kitchen staff not to remove drain screens as this may allow paper or plastic cups, straws, and other utensils to enter the plumbing system during clean up. The success of dry clean up is dependent upon the behavior of the employee and availability of the tools for removal of food waste before washing. To practice dry clean up:

- Use rubber scrapers to remove fats, oils and grease from cookware, utensils, chafing dishes, and serving ware.
- Use food grade paper to soak up oil and grease under fryer baskets.
- Use paper towels to wipe down work areas. Cloth towels will accumulate grease that will eventually end up in your drains from towel washing/rinsing.

Spill Prevention

Preventing spills reduces the amounts of waste on food preparation and serving areas that will require clean up. A dry workplace is safer for employees in avoiding slip, trips, and falls. For spill prevention:

- Empty containers before they are full to avoid spills.
- Use a cover to transport interceptor contents to rendering barrel.
- Provide employees with the proper tools (ladles, ample containers, etc.) to transport materials without spilling.

Maintenance

Maintenance is key to avoiding FOG blockages. For whatever method or technology is used to collect, filter and store FOG, ensure that equipment is regularly maintained. All staff should be aware of and trained to perform correct cleaning procedures, particularly for under-sink interceptors that are prone to break down due to improper maintenance. A daily and weekly maintenance schedule is highly recommended.

- Contract with a management company to professionally clean large hood filters. Small hoods can be hand-cleaned with spray detergents and wiped down with cloths for cleaning. Hood filters can be effectively cleaned by routinely spraying with hot water with little or no detergents over the mop sink that should be connected to a grease trap. After hot water rinse (separately trapped), filter panels can go into the dishwasher. For hoods to operate properly in the removal of grease-laden vapors, the ventilation system will also need to be balanced with sufficient make-up air.



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ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF POLLUTION PREVENTION AND
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NORTH CAROLINA
PRETREATMENT CONSORTIUM



- Skim/filter fryer grease daily and change oil when necessary. Use a test kit provided by your grocery distributor rather than simply a "guess" to determine when to change oil. This extends the life of both the fryer and the oil. Build-up of carbon deposits on the bottom of the fryer act as an insulator that forces the fryer to heat longer, thus causing the oil to break down sooner.
- Collect fryer oil in an oil rendering tank for disposal or transport it to a bulk oil rendering tank instead of discharging it into a grease interceptor or waste drain.
- Cleaning intervals depend upon the type of food establishment involved. Some facilities require monthly or once every two months cleaning. Establishments that operate a large number of fryers or handle a large amount of fried foods such as chicken, along with ethnic food establishments may need at least monthly cleanings. Full-cleaning of grease traps (removing all liquids and solids and scraping the walls) is a worthwhile investment. Remember, sugars, starches and other organics accumulate from the bottom up. If sediment is allowed to accumulate in the trap, it will need to be pumped more frequently.
- Develop a rotation system if multiple fryers are in use. Designate a single fryer for products that are particularly high in deposits, and change that one more often.

Oil & Grease Collection/Recycling & Food Donations

FOG are commodities that if handled properly can be treated as a valuable resource.

- Begin thinking of oil and grease as a valuable commodity. Some rendering companies will offer services free-of-charge and others will give a rebate on the materials collected. Note that these companies must be properly permitted by the Division of Waste Management, Solid Waste Section at 919.733.0692, in order to remove FOG from a facility. A list of grease collectors can be found in the *Directory of Markets for Recyclable Materials* at www.p2pays.org/DMRM or by calling DPPEA at 1.800.763.0136.
- Use 25-gallon rendering barrels with covers for onsite collection of oil and grease other than from fryers. Educate kitchen staff on the importance of keeping outside barrels covered at all times. During storms, uncovered or partially covered barrels allow storm water to enter the barrel resulting in oil running onto the ground and possibly into storm drains, and can "contaminate" an otherwise useful byproduct.
- Use a 3-compartment sink for ware washing. Begin with a hot pre-wash, then a scouring sink with detergent, then a rinse sink.

- Make sure all drain screens are installed.
- Prior to washing and rinsing use a hot water ONLY (no detergent) prerinse that is separately trapped to remove non-emulsified oils and greases from ware washing. Wash and rinse steps should also be trapped.
- Empty grill top scrap baskets or scrap boxes and hoods into the rendering barrel.
- Easy does it! Instruct staff to be conservative about their use of fats, oils and grease in food preparation and serving.
- Ensure that edible food is not flushed down your drains. Edible food waste may be donated to a local food bank. Inedible food waste can be collected by a local garbage feeder who will use food discards for feeding livestock. Food donation is a win-win situation. It helps restaurants reduce disposal costs and it puts the food in the hands of those who can use it. Check the *Directory of Markets for Recyclable Materials* for a list of food waste collectors.

Grease Traps

- For grease traps to be effective, the units must be properly sized, constructed, and installed in a location to provide an adequate retention time for settling and accumulation of the FOG. If the units are too close to the FOG discharge and do not have enough volume to allow amassing of the FOG, the emulsified oils will pass through the unit without being captured. For information on properly locating, constructing, and sizing grease traps, contact your local county and city representatives and examine EPA guidance documents.
- Ensure all grease-bearing drains discharge to the grease trap. These include mop sinks, woks, wash sinks, prep sinks, utility sinks, pulpers, dishwashers, prerinse sinks, can washes, and floor drains in food preparation areas such as those near a fryer or tilt/steam kettle. No toilet wastes should be plumbed to the grease trap.
- If these suggested best management practices do not adequately reduce FOG levels, the operator may consider installing a second grease trap with flow-through venting. This system should help reduce grease effluent substantially.

Consumer Tip

Buyer beware! When choosing a method of managing your oil and grease, ensure that it does what the vendor says it will do. Some technologies or "miracle cures" don't eliminate the problem but result in grease accumulations further down the sewer line. "Out of sight" is not "out of mind." Check the vendor's references.



The **Grease Goblin** is the mascot for DPPEA's Oil and Grease Management Program. He serves as a reminder to keep grease out of sinks and drains before it becomes a nuisance.

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