

DANDRIDGE WATER MANAGEMENT FACILITY FOG PROGRAM

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I. PURPOSE OF THE FOG PROGRAM

Grease is one of the primary causes of stoppages, backups, and overflows in a wastewater collection system. Grease buildup in the sewers also causes restrictions and capacity problems. DWMF's goal is to improve sewer service by reducing the impact of grease and to facilitate compliance with Title 18 of the Town of Dandridge Code and the Tennessee Water Quality Control Act.

This Policy provides regulations governing waste generators and haulers in order to manage grease wastes generated by customers discharging to the Dandridge Water Management Facility's sewer system. It is the intent of the DWMF's FOG Program to enforce this Policy as to eliminate the problems associated with fats, oils and greases that enter the collection system. It should be noted that failure to comply with this Policy shall be considered a violation of applicable sections of the existing Sanitary Sewer Ordinance and consequently, subject to applicable penalties and/or denial or discontinuance of water and/or sewer service.

II. Applicability

This policy is applicable for all new and existing food service establishments discharging fats, oils, and greases into the sanitary sewage system. No food service establishment shall be "grand-fathered in". Each food service establishment shall abide by the requirements set forth in the FOG Program. The conditions of this program are also applicable to businesses providing grease waste collection and disposal services to customers connected to Dandridge Water Management's sewer system.

This Policy shall supplement some requirements of the 1997 Standard Plumbing Code as adopted by the Town of Dandridge. In cases of conflict, this policy shall supercede the 1997 Standard Plumbing Code. All grease traps, interceptors and inspection manhole installations shall meet the requirements of the 1997 Standard Plumbing Code and all other local government requirements. The user is responsible for compliance with all applicable regulations.

III. DEFINITIONS

Unless otherwise expressly stated or the context clearly indicates a different intention, the following terms shall, for the purpose of this document, have the meanings indicated in this section:

A. Black Water

Wastewater from sanitary fixtures such as toilets and urinals

B. BOD

Refers to the “Biochemical Oxygen Demand” which is an indirect measure of the organic matter present in the wastewater and its demand for oxygen

C. Bulk Service Kitchen

An establishment, which prepares bulk quantities of food, such as hospitals, schools, or caterers

D. Common Grease Interceptor

A device to which grease wastes are directed from more than one establishment, having different operators or type of operations, such as in a Food Court

E. Customer

A user of the sanitary sewer system who produces wastes from their process operations; the customer is responsible for assuring that the produced waste is disposed of in accordance with all Federal, State and local disposal regulations

F. Discharge Limit

This refers to the DWMF effluent discharge limit for grease interceptors/traps in accordance with the DWMF’s Sanitary Sewer Ordinance. The oil and grease discharge limit is 100mg/L.

G. Food Courts

Areas predominantly found in shopping centers or amusement parks and festivals where several food preparation establishments having different owners may be sharing seating space and/or plumbing establishments

H. Food Service Establishment (FSE)

Any establishment, which cuts, cooks, bakes, prepares, or serves food, or which disposes of food related wastes

I. Garbage Grinder

A device, which shreds or grinds up solid or semisolid waste materials into smaller portions for discharge into the sanitary sewer collection system

J. Gray Water

Refers to all wastewater other than “Black Water” as defined in this section

K. Grease

A material composed primarily of fats, oils, and greases from animal or vegetable sources; the terms fats, oils, and greases shall be deemed as Grease by definition (Grease does not include petroleum-based products **G R A M**)

L. Grease Interceptor

A large tank or device so constructed as to separate and trap or hold fats, oil, and grease substances from the sewage discharged from an establishment in order to keep

fats, oil, and grease substances from entering the sanitary sewer collection system; Grease Interceptors are located outside of food service establishments

M. Grease Trap

The device that is utilized to affect the separation of fats, greases, and oils in wastewater effluents from kitchen sinks and dishwashers; such traps are “under-the-counter” package units that require a minimal amount of space for installation

N. 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

O. Lift Stations

A well or below ground tank that contains a pump, floats, and/or digital sensors to measure the amount of wastewater in the tank. The tank collects wastewater from gravity fed sewer lines then pumps the waste to a force main that discharges to a wastewater treatment plant. The term pump station also refers to a lift station.

P. NPDES

Stands for National Pollution Discharge Elimination System under which the DWMF’s Wastewater Treatment Plants are permitted

Q. pH

The measure of the Hydrogen ion concentration of water is determined by means of chemical testing; the result is expressed as a pH value with a range of 1-14; values lower than seven (7) indicate the water is acidic; values around seven (7) indicate the water is neutral and values higher than seven (7) indicate the water is basic.

R. POTW

Stands for Publicly-Owned Treatment Works or “Treatment Works” as defined by Section 212 of the Clean Water Act (33 U.S.C. § 1292), which is owned or operated in this instance by the DWMF; this definition includes any sewers that convey wastewater to DWMF’s sewage treatment plants

S. Pretreatment

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

T. Pretreatment Coordinator

An individual employed by DWMF who is charged with the responsibility of administering the provisions of the pretreatment program to ensure compliance by

users with applicable laws, rules, regulations, resolutions and ordinances relative to the concentration(s) of substances found in the waste stream of establishments connected to the POTW

U. Sewage

The liquid and water-carried domestic or industrial wastes from dwellings, commercial establishments, industrial establishments, and institutions, whether treated or untreated; the terms “waste” and “wastewater” shall be deemed as sewage by definition

V. Sewer Lateral

Sewer line or lines maintained and controlled by private persons for the purpose of conveying sewage from the waste producing location to the public sanitary sewer collection system

W. Single Service Restaurant

A restaurant where the meals are served on disposable plates and utensils

X. Standard Restaurant

A restaurant where meals are served on plates and utensils, which are washed and re-used

Y. Waste

The liquid and water-carried domestic or industrial wastes from dwellings, commercial establishments, industrial establishments, and institutions, whether treated or untreated; wastes may include but not be limited to, discharges from scullery sinks, pot and pan sinks, dishwashing machines, soup kettles, and floor drains located in areas where grease-containing materials may exist. The terms “sewage” and “wastewater” shall be deemed as Waste by definition

Z. 25% Rule

If 25% of Interceptor capacity is taken up by FOG and Solids, then the interceptor needs pumping; *example*: Interceptor depth is 48” and has 6” of FOG and 6” of settled solids, then 25% capacity is met

IV. GENERAL CRITERIA

A. Installation Requirements for New Food Service Establishments

All Food Service Establishments inside the DWMF wastewater service area shall be required to install an approved, properly operated, and maintained grease interceptor.

B. Phased Implementation Plan for Existing Food Service Establishments

All existing Food Service Establishments inside the DWMF wastewater service area are expected to conduct their operations in such a manner that grease is captured on the user’s premises and properly disposed. Existing

Food Service Establishments will be given ninety days after receiving notification to install an approved grease interceptor.

- 1) DWMF will periodically inspect each Food Service Establishment on an as-needed basis to ensure that each establishment is complying with the intent of the FOG Program. Grease interceptors/traps must be certified by DWMF annually. DWMF's goal is to achieve compliance by all existing Food Service Establishments by January 1, 2008.
- 2) Through preventive maintenance records or emergency calls related to grease, DWMF will identify and target "grease problem areas" in the waste water collection system. Food Service Establishments, located upstream of these problem areas who discharge their waste water into the "problem" lines, will be identified as potential contributors to the grease build-up.
- 3) Each Food Service Establishment in the vicinity of the "problem area" will be inspected. The Establishments' grease control practices and the adequacy of their grease interceptor/trap will be assessed. Maintenance records, sizing, and conditions will be reviewed.
- 4) Following the inspections, DWMF will send written notice to the inspected Food Service Establishments containing an educational brochure on grease in the sewer system, a summary of the policy requirements, and the results of the inspection. The inspections will typically result in one of the following actions:
 - a) Establishments equipped with an appropriate and adequately-sized grease interceptor/trap who are meeting the intent of the FOG Program through effective grease control practices will be commended for their compliance.
 - b) Establishments may be required to develop and submit to DWMF a proposed plan designed to achieve compliance through improved housekeeping and increased maintenance and pumping on the existing grease interceptor/trap.
 - c) Establishments that are unsuccessful in achieving compliance with the intent of the FOG Program through improved housekeeping and increased maintenance and pumping on the existing grease interceptor/equipment will be required to upgrade the necessary interceptor(s) to bring the establishment into compliance within ninety days. If the customer requires more than the allotted time, a request for an extension must be made in writing at least ten days prior to compliance deadline.

d) Food service establishments shall train their employees on proper grease disposal practices and maintain documentation that each employee has received such training.

C. Prohibited Discharges

1) Black water shall not be discharged into the grease interceptor unless specifically approved, in writing, by DWMF.

2) According to Article 206.3.b. of the Sanitary Sewer Use Ordinance for the Town of Dandridge, a User may not contribute the following substances to any sewage works:

206.3.b. Solid or viscous substances which may cause obstruction to the flow in a sewer or other interference with the operation of the sewage treatment facilities such as, but not limited to: grease, garbage with particles greater than one-half inch (1/2") in any dimension...

D. Floor Drains

All floor drains in the kitchen and food storage areas must go through the grease interceptor. Additionally, all floor drains **must** have screens to prevent solid items from entering the sewer line.

E. Garbage Grinder and Dishwashers

1) DWMF recommends that solid food waste products be disposed of through normal solid waste/garbage disposal procedures. The use of garbage grinders, which discharge into the sanitary sewer, is discouraged within the DWMF wastewater service area. In the event that a device is used in a commercial or industrial establishment, it must be connected to the grease interceptor. The use of a garbage grinder decreases the operational capacity of the grease interceptor and will require an increased pumping frequency to ensure continuous and effective operation. No paper, plastic or cloth material may be disposed of in a garbage grinder or kitchen drain.

2) Commercial dishwasher connections must be connected to the grease interceptor. Dishwashers discharge hot water and soap, which can melt grease stored in an overburdened interceptor. Melted grease may then pass through the interceptor into the customer's service line and the public sewer system, where the grease hardens and causes line clogs. Dishwasher temperatures should be regulated as such to maintain adequate trap effluent temperature. Trap effluent temperature should be no greater than 80 degrees Fahrenheit.

3) All sinks, dishwashers, soda machines, and garbage disposal drains must also go through the Grease interceptor. All fixtures may remain connected to a grease interceptor, except fixtures which may discharge black water.

F. Location

- 1) Each grease interceptor shall be installed and connected so that it is easily accessible for inspection, cleaning, and removal of the intercepted grease at any time. A grease interceptor may not be installed in any part of a building unless approved in writing by DWMF.

- 2) Location of grease interceptors shall meet the approval of DWMF. The best location of an interceptor is in an area outside of an outside wall, but upstream from the black water drain line(s).

V. DESIGN CRITERIA

A. Construction of Grease Interceptor

Grease interceptors shall be constructed in accordance with DWMF's standards and shall have a minimum of two compartments with fittings designed for grease retention. All grease removal devices or technologies shall be subject to the written approval of DWMF. Such approval shall be based on demonstrated removal efficiencies of the proposed technology. DWMF's standard drawing for grease interceptors is shown in Appendix A.

B. Access

Access to grease interceptors/traps shall be available at all times, to allow for their maintenance and inspection. Access to grease interceptors shall be provided by 2 (two) manholes terminating 1-inch above finished grade with cast iron frame and cover, constructed so that all surface runoff of rainwater or storm water is prevented from entering the trap or sanitary sewer system.

C. Discharge Requirements

Interceptor discharges shall not exceed 100mg/L of oil and grease.

D. Load-Bearing Capacity

In areas where additional weight loads may exist, the grease interceptor shall be designed to have adequate load-bearing capacity (example: vehicular traffic in parking or driving areas).

E. Inlet and Outlet Piping

Wastewater discharging to a grease interceptor shall enter only through the inlet pipe of the interceptor. Each grease interceptor shall have only one inlet and one outlet pipe.

F. Interceptor Sizing

The minimum capacity of a grease interceptor shall be 1,000 gallons. Each establishment may install a larger capacity interceptor not to exceed 3,000 gallons per interceptor, or interceptors may be installed in series if needed to meet the Discharge Requirements of 100 mg/L of oil and grease. In order to approximate the capacity required to meet the Discharge Requirement, establishments can use DWMF's Grease Interceptor Sizing Formula shown in Appendix B. Grease interceptors will have a

capacity of not less than 1,000 gallons nor exceed a capacity of 3,000 gallons. If the calculated capacity using the DWMF Grease Interceptor/Trap Sizing Formula exceeds 3,000 gallons, multiple units in series may be installed.

See Appendix B for example of formula

Grease interceptor designs represent minimum standards for normal usage. Installations with heavier usage require more stringent measures for which the user is responsible and shall pay the costs to provide additional measures if required by DWMF. DWMF reserves the right to evaluate interceptor sizing on an individual basis for establishments with special conditions, such as highly variable flows, high levels of grease discharge, or other unusual situations that are not adequately addressed by the formula.

G. Upgrades or Changes

Any changes or upgrades to an existing or new Food Service Establishment, which, directly or indirectly, affect grease discharge to the DWMF collection system must be reported to DWMF.

VI. GREASE INTERCEPTOR/TRAP MAINTENANCE

A. Cleaning/Pumping

The user at the user's expense shall properly operate and maintain all grease interceptors/traps. Maintenance of grease interceptors/traps shall include the **complete removal of all contents**, including floating materials, wastewater, and bottom sludge and solids. Decanting or discharging of removed waste back into the interceptor from which the waste was removed or any other grease interceptor/trap, for the purpose of reducing the volume to be disposed, is prohibited. No de-watering or surface skimming trucks are allowed to service grease interceptors. No steam cleaners or pressure washers may be used until the tank is pumped dry, and then they may be used to clean the tank walls. It is the responsibility of each establishment to ensure proper pumping, maintenance, and record keeping.

B. Cleaning/Pumping Frequency

"Under the sink" grease traps must be cleaned no less than weekly. If grease traps are more than 50% full when cleaned weekly, the frequency shall be increased. Grease interceptors must be pumped out completely a minimum of once every three months or more frequently as needed to prevent carryover of grease into the sanitary sewer collection system, unless it can be demonstrated to DWMF that the pumping frequency can be extended past the three month period.

C. Disposal of Grease Interceptor Waste

All waste removed from each grease interceptor/trap must be disposed of at an establishment approved by DWMF to receive such waste in accordance with the provisions of this program. In no way shall the pumpage be returned to any private or public portion of the sanitary sewer collection system.

D. Additives

The DWMF prohibits the introduction of chemicals, degreasers, acidic or caustic substances, or any drain line additives that emulsify or otherwise temporarily dissolve fats, oils, and grease to the extent it later solidifies in the DWMF's sewer lines, pump stations or treatment plants. The following types of substances are prohibited from being used in floor drains, sinks, or any other collection line that discharges to the grease interceptor:

Enzymes, spore-forming bacteria, chlorine bleach, emulsifiers, surfactants (soaps), industrial strength degreasers, acidic chemicals or cleaners, caustic chemicals or cleaners, solvents, citrus oils/cleaners for odors, sodium nitrate, substances with high flammability.

E. Chemical Treatment

Chemical treatments such as drain cleaners, acid and other chemicals designed to dissolve or remove grease shall not be allowed to enter the grease interceptor.

F. Manifest

All pumpage from grease interceptors must be tracked by a manifest, which confirms pumping, hauling, and disposal of waste. The customer must obtain a copy of the original manifest from the hauler. The original manifest with original signatures must be left at the disposal establishment. A copy of the manifest must be provided to the DWMF within 7 days of pumping. The customer is required to utilize only DWMF permitted haulers for the disposal of grease.

G. Maintenance Record

A Grease Interceptor Cleaning Record Maintenance Record indicating each pumping for the previous 24 months shall be maintained by each Food Service Establishment. This record shall include the date, time, amount pumped, hauler, and disposal site and shall be kept in a conspicuous location for inspection. Said record shall be made immediately available to the DWMF representative upon request.

VII ADMINISTRATIVE REQUIREMENTS

A. Initial Data Acquisition

Upon inspection of each Food Service Establishment, DWMF's inspector shall collect the necessary FOG data to facilitate the population of DWMF's Grease Control Program database. The database will be updated with additional or modified information after each inspection.

B. Administrative Fee

An administrative fee for establishments with grease discharges shall be set by DWMF. The fee shall be established to insure full cost recovery and shall include but not be limited to the cost of field, administrative, engineering, clerical, testing, permit origination and processing expenses involved. The fees shall be not less than \$200.00 per year for each establishment. The annual administrative fee shall be applied to the customer's July water & sewer service bill.

C. Permit Requirements

All new and existing food service establishments discharging fats, oils, and greases into the sanitary sewage system shall be issued an Oil and Grease Interceptor/Trap Discharge Permit Application on an annual basis. The permit should be kept on-site for DWMF inspection. Permits cannot be transferred to a new owner or another location of the same business.

D. Monitoring

As a condition for service, the user shall provide, operate, and maintain, at user's expense, safe and accessible monitoring establishments (such as a suitable manhole) at all times to allow observation, inspection, sampling, and flow measurement of the building sewer or internal drainage systems. There shall be ample room in or near such monitoring establishment to allow accurate sampling and preparation of samples for analysis. When the physical location and hydraulic conditions are suitable, a manhole or similar Establishment existing on the sanitary sewer collection system may be utilized as the user's manhole when agreed to by both the user and DWMF.

E. Inspection and Entry

Authorized personnel of DWMF, bearing proper credentials and identification, shall have the right to enter upon all properties subject to this program, at any time and without prior notification, for the purpose of inspection, observation, measurement, sampling, testing or record review, in accordance with this program.

VIII. ENFORCEMENT

DWMF shall have the administrative authority to enforce this program. Whenever DWMF finds that any user has violated or is violating this program, or any prohibition, limitation, or requirements contained herein, DWMF will initiate corrective action, which may include but not be limited to the following:

A. Notice of Violation

DWMF may issue any user a written notice stating the nature of violation. Within fifteen (15) days of the date of notice, a plan for the satisfactory correction thereof shall be submitted to DWMF by the user.

B. Consent Order

DWMF may enter into consent orders, assurances of voluntary compliance, or other similar documents establishing an agreement with the user responsible for noncompliance. Such orders will include specific action to be taken by the user to correct the noncompliance with a time period specified by the order.

C. Emergency Suspension of Services

DWMF may suspend water or sewer service when such suspension is necessary, in the opinion of DWMF; in order to stop an actual or threatened discharge which:

- 1) presents or may present an imminent or substantial endangerment to the health or welfare of persons or the environment;
- 2) causes stoppages, sanitary sewer overflows, or excessive maintenance to be

performed to prevent stoppages in the sanitary sewer collection system;

3) causes interference to the POTW; or

4) causes DWMF to violate any condition of its NPDES permits

Any person notified of a suspension of the water or sewer service shall immediately stop or eliminate the discharge. In the event of a failure of the person to comply voluntarily with the suspension order, DWMF shall take such steps as deemed necessary, including immediate termination of water or sewer service, to prevent or minimize damage to the POTW system or sewer connection or endangerment to any individuals. DWMF shall reinstate the water or sewer service when such conditions causing the suspension have been eliminated and the reconnection fee paid. A detailed written statement submitted by the user describing the cause(s) of the harmful discharge and the measure(s) taken to prevent any future occurrence shall be submitted to DWMF within fifteen (15) days of the date of occurrence.

D. Administrative Order

When DWMF finds that a user has violated or continues to violate the provisions set forth in this program, or the order issued hereunder, DWMF may issue an order for compliance to the user responsible for the discharge. Orders may contain any requirements as might be reasonable, necessary, and appropriate to address the noncompliance, including but not be limited to the installation of pretreatment technology, additional self-monitoring, and management practices.

E. Administrative Penalty

Notwithstanding any other remedies or procedures available to DWMF, any Permitted user who is found to have violated any provision of this program, or any order issued hereunder, may be assessed an administrative penalty of not to exceed one thousand dollars (\$1,000) per violation. Each day on which noncompliance shall occur or continue shall be deemed a separate and distinct violation. Such assessment may be added to the user's next scheduled sewer service charge and DWMF shall have such other collection remedies as are available by law.

F. Request for Hearing and Appeal

Any person affected by a penalty, order, or directive of DWMF issued pursuant to this program may, within ten (10) days of the issuance of such penalty, order, or directive, request a hearing in writing before DWMF to show cause why such should be modified or made to not apply to such person. The requested hearing shall be held as soon as practical after receiving the request, at which time the person affected shall have an opportunity to be heard. At the conclusion of the hearing, DWMF shall issue a written response to the person requesting the hearing affirming, modifying, or rescinding the penalty, order, or directive at issue.

APPENDICES