Murfreesboro Water and Sewer Department
Fats, Oils & Grease Management Policy
2016

Basis:

The Murfreesboro Water & Sewer Department Fats, Oils and Grease Management Policy is based on the *Murfreesboro City Code, Chapter 33, Article III. Sewer Usage and Specifications, Section 33-36: Use of the Public Sewers, (A) Prohibited discharges, (B) Regulated discharges, (F) Local Limits.* In addition, the Environmental Protection Agency's Capacity, Management, Operation, and Maintenance (CMOM) Program criteria include the implementation and operation of a Fats, Oils and Grease (FOG) Management Program.

Scope & Purpose:

To prevent sanitary sewer system blockages, obstructions, fouling of treatment equipment and overflows that result from the contribution and accumulation of FOG from Food Service Establishments (FSE's) and other generators of FOG.

Definitions:

1. Automatic Grease Recovery Unit (AGRU): An electro-mechanical grease control device that separates and removes FOG and solid particles from the wastewater stream prior to discharging to the sewerage system. The AGRU is typically installed immediately downstream from a plumbing fixture's point of discharge. Automated function requires less intervention by the FSE to ensure efficient and effective operation.

2. Best Management Practices (BMP's): Schedules of activities, prohibitions of practices, maintenance procedures and other management practices to prevent or reduce the introduction of FOG to the sewerage system.

3. Black Water: Wastewater containing human waste, from sanitary fixtures such as toilets and urinals.

4. Brown Grease: Fats, oils and grease that are discharged to the grease control equipment originating from kitchen or food prep wastewater.

5. Change in Operations: Any change in the ownership, menu items, hours of operation, an increase in production or sales volume or operational procedures that have a potential to increase the amount of FOG generated and / or discharged

by Food Service Establishments in an amount that alone or collectively cause or creates a potential for Sanitary Sewer Overflows.

6. Director: Shall mean the Director of the Water and Sewer Department of the City of Murfreesboro (MWSD) or authorized deputy, agent or representative.

7. FOG: an abbreviation for Fats, Oils, & Grease typically derived from animal or vegetable origins that may interfere with the operation of the collection system or publicly owned treatment works (POTW), or become a removal problem at the POTW. Although FOG also originates from mineral and petroleum based products such as motor oil, the highest percentage of FOG discharged into the sewer is generated primarily by FSE's from activities such as food preparation.

8. FSE: an abbreviation for Food Service Establishment which is defined as any non residential facility engaged in cooking or preparing food for consumption including but not limited to; restaurants, grocery stores, hotels, hospitals, schools, nursing homes, retirement centers, quick stop markets, prisons, bars/lounges, malls, retail outlets and mobile food units.

9. Gray Water: Refers to all other wastewater other than black water as defined in this section.

10. Grease Control Equipment (GCE): A device for separating and retaining wastewater FOG prior to wastewater exiting the FSE and entering the Department's sewer system. The GCE must be constructed so as to separate and trap or hold fats, oils and grease substances from entering the Department's sewer system. Devices include grease interceptors, grease traps, or other devices approved by the Director.

11. Grease Interceptor: Passive Grease Control Device identified as a large tank, usually 1,000 gallon to 2,000 gallon capacity, typically designed with a baffle wall that separates the influent (inlet) and effluent (outlet) chambers of the tank (although some grease interceptor designs rely on other specialized components for flow control and do not require a baffle) and is equipped with proper influent and effluent Tees that provides FOG control for a FSE. Grease interceptors will be located on the exterior in close proximity to the FSE, unless a variance request has been granted otherwise. Requires specialized periodic maintenance initiated by the FSE for consistently efficient and effective operation.

12. Grease Recycle Container: Container used for the storage of yellow grease.

13. NAICS: Is the abbreviation for the North American Industry Classification System. NAICS provides comparable industry and service industry

classifications. FSEs shall be classified by NAICS codes for the purpose of requiring comparable FOG control for comparable FSEs.

14. Passive shall mean a specific operating principle incorporated into grease control equipment designs that utilizes gravity applied over a specified amount of time (detention time) as the primary means of separation of FOG from the waste stream to occur.

15. Passive Grease Trap: Grease Control Equipment identified as an "under the sink" or a "floor" trap. Passive grease traps are typically small capacity containers usually with flow ratings below 100 gallons per minute and are generally installed inside the facility. Requires diligent maintenance performed or initiated by the FSE for consistently efficient and effective operation.

16. Remodeling: A physical change or Change in Operations which may cause generation of an amount of FOG that exceeds the current amount of FOG discharge to the sewerage system by the FSE in an amount that may cause or create a potential for a SSO to occur. A physical change includes any one of the following: (1) a change to any part of the building or premises requiring a building permit, (2) under slab plumbing in the food processing area, (3) an increase in the net public seating area, (4) an increase in the size of the kitchen area, or (5) any change in the size or type of the food preparation equipment. A Change in Operations may include but not limited to a change in hours of operation, increased sales or change in menu; see definition above.

17. SSO: Shall mean sanitary sewer overflow.

18. Tee (Influent and Effluent): A Tee shaped (like the letter T) pipe extending from the ground surface below grade into the grease interceptor to a depth allowing recovery (discharge) of the water layer located under the layer of FOG. Influent (Inlet) & Effluent (Outlet) Tee's are recommended to be made of schedule 40 PVC or equivalent material. Influent Tee's should extend to within 18" of the bottom of the interceptor. Effluent Tee's should extend to within 12" of the bottom of the interceptor.

19. Yellow Grease: Fats, oils and grease that has not been in contact or contaminated from other sources (water, wastewater, solid waste, etc…) and can be recycled.

FOG Discharge Limitations, Prohibitions and Requirements General:

FOG Discharge Prohibition - No FSE shall discharge or cause to be discharged into the Murfreesboro sewerage system FOG that exceeds the applicable concentration level specified in Section 33-36 of the Murfreesboro City Code or to accumulate and / or cause or contribute to blockages in the sewer collection system or the sewer system lateral which connects the FSE to the sewer system or in the building sewer.

Food Service Establishment Prohibitions- The following prohibitions shall apply to ***all*** FSE's:

(1) Installation and / or utilization of food grinders in the plumbing system of newly constructed or established Food Service Establishment's is prohibited. Existing food grinders must be removed.
(2) Introduction of any additives into a FSE wastewater system for the purpose of emulsifying FOG is prohibited, unless a specific written authorization from the Director is obtained.
(3) Disposal of waste cooking oil into drainage pipes connected to the City's sanitary sewer system is prohibited. All waste cooking oils shall be collected and stored properly in receptacles for recycling or other acceptable methods of disposal.
(4) Discharge of wastewater with temperatures in excess of 140 F to any grease control device, including grease traps and grease interceptors, is prohibited unless a specific written authorization from the Director is obtained.
(5) Discharge of wastes from toilets, urinals, and other fixtures containing fecal materials to sewer lines intended for grease interceptor service, or vice versa, is prohibited.
(6) Discharge of any waste including FOG and solid materials removed from the grease control device to the sewer system is prohibited
(7) Increasing the use of water or in any other manner attempting to dilute a discharge as a partial or complete substitute for treatment to achieve compliance with this policy is prohibited.

Best Management Practices required - Food Service Establishments shall implement Best Management Practices in their operation to minimize the discharge of FOG to the sewer system. Best Management Practices include but are limited to those found in appendix A.

General Requirements and Recordkeeping:

1. All Food Service Establishments (FSE's) are required to have grease control equipment (GCE) installed, maintained and operating properly.

2. All FSE's will be required to maintain records of cleaning and maintenance of GCE at the FSE location. GCE maintenance records include, at a minimum, the date of cleaning, company or person conducting the cleaning, amount or volume of grease wastewater removed. A grease waste hauler completed manifest will satisfy this requirement.

3. GCE maintenance records will be maintained at the FSE premises so they are available to Murfreesboro Water and Sewer Department personnel or their representative, and / or the Tennessee Department of Environment and

Conservation upon request during normal business hours. The FSE shall maintain GCE maintenance records for three (3) years.

4. No FSE will discharge FOG in concentrations or in a manner which exceeds that which is prohibited in Section 33-36 (c) and (f) of the Murfreesboro City Code.

5. All FSE's are required to store and dispose of yellow grease in such a manner the contents will not be discharged to any storm water grate, drain or conveyance. Pouring or discharging yellow grease, or any fats, oils or grease, into the FSE sewer lines, or Murfreesboro sewer system, is a violation of this ordinance.

New Food Service Establishments, Upgrading of an Existing Food Service Establishment including Changes in Operation or Remodeling or Change in Ownership of an Existing Food Service Establishment Requirements:

Any new FSE, upgrading of an existing FSE including but not limited to; additional kitchen equipment, changes in operation, remodeling, an increase of the quantity and / or frequency of FOG discharge or a change in FSE ownership will be required to submit a ***Wastewater Grease Interceptor / Trap Application*** form. Any new FSE shall submit a FOG Control Plan including a design for an appropriate grease control device in addition to the Grease Interceptor / Trap application. An existing FSE required to submit an application may also be required to submit a FOG Control Plan.

The ***Wastewater Grease Interceptor / Trap Application***, which is available by request or in electronic form by visiting the Department's web page, includes identification of all cooking and food preparation equipment (i.e. fryers, grills, woks, etc…); the number and size of dishwashers, sinks, floor drains, and other plumbing fixtures; NAICS Code; type of food to be served; and plans for the grease interceptor dimensions and location. The Department will review the application and FOG Control Plan, verify grease control equipment sizing and either approve or make changes as necessary.

All Food Service Establishments shall be in compliance with this policy no later than **ninety (90) days after being given notice of the requirement to become compliant**. This time may be extended by the Director for extenuating circumstances.

Grease Control Equipment Installation Requirements: FSE's with a kitchen equipment / plumbing fixture configuration that yields a MWSD verified calculation specifying less than 500 gallons of GCE capacity may elect to install an AGRU type of grease control device located inside and under or adjacent to the three (3) compartment sink. Where necessary, multiple unit AGRU installations may be required in order to provide adequate protection at all points of discharge (example: a three compartment sink and a prep sink). For a FSE that has met the GCE sizing criteria or has otherwise been approved to install a grease trap, the minimum size requirement is the equivalent of a 20 gallon per minute / 40 pound capacity AGRU type of grease trap. All grease traps will have a flow control restrictor and a vent pipe. **Passive style grease traps shall not be permitted in new or replacement GCE installations.**

All FSE's with a MWSD verified calculation specifying 500 gallons or greater of GCE capacity will be required to install a minimum 1,000 gallon capacity or equivalent grease interceptor, typically located in close proximity to the kitchen, in-ground and outside, unless approved otherwise by the Director.

Variance to Grease Interceptor Installation: At the **discretion** of the Director, in some instances where a minimum 1,000 gallon capacity or equivalent grease interceptor is required, a FSE may receive a variance in lieu of the required installation of a 1,000 gallon capacity or equivalent grease interceptor where unusual circumstances, such as space constraints or in the interest of historical preservation, would render an otherwise typical grease interceptor installation impractical or unreasonable. **Final specifications for the capacity and type of all new GCE for any given Food Service Establishment kitchen equipment / plumbing fixture configuration will be determined by MWSD. All GCE must be approved by MWSD prior to installation.**

Variance from Grease Interceptor Requirements for Alternative Equipment or Conditional Variance:

A variance from the grease interceptor requirements to allow alternative pretreatment technology that is at least equally effective in controlling the FOG discharge in lieu of the required grease interceptor may be granted to Food Service Establishments demonstrating that it is impossible or impracticable to install, operate or maintain a grease interceptor. The applicant shall bear the burden of demonstrating that the alternative method of disposal is at least equally effective. The Director's determination to grant a variance will be based upon, but not limited to, evaluation of the following conditions:

(1) There is no adequate space for installation and / or maintenance of a grease interceptor.

(2) There is no adequate slope for gravity flow between kitchen plumbing fixtures, the grease interceptor and the private collection lines or the public sewer.

(3) The Food Service Establishment has justified that the alternative grease control equipment is equivalent to or better than a grease interceptor in controlling its FOG discharge. In addition, after installation of the alternative grease control equipment, the Food Service Establishment must be able to demonstrate its effectiveness to control FOG discharges through downstream visual monitoring of the sewer system for at least three months at its own expense. The variance may be rescinded if the alternative equipment is not found to be effective in maintaining FOG discharges to the sanitary sewerage system in concentrations below the limitations as established in Section 33-36 of the Murfreesboro City Code.

The Director's determination to grant or revoke a conditional variance shall be based upon, but not limited to, evaluation of the following conditions:

(1) Quantity of FOG discharge as measured or as indicated by the size of Food Service Establishment based on seating capacity, number of meals served, menu, water usage, amount of on-site consumption of prepared food and other conditions that may reasonably by shown to contribute to FOG discharges.

(2) A MWSD approved grease control device is properly installed and operated.

(3) Adequacy of implementation of Best Management Practices and compliance history.

(4) Sewer size, grade, condition based on visual information. FOG deposition in the sewer by the Food Service Establishment, and history of maintenance and sewage spills in the receiving sewer system.

(5) Changes in Operations that significantly affect FOG discharge.

(6) Any other condition deemed reasonably related to the generation of FOG discharges by the Director.

Waiver from Grease Control Equipment Installation with Grease Disposal Mitigation Fee

For Food Service Establishments where the installation of grease interceptor is not feasible and no equivalent alternative grease control equipment can be installed, a waiver from the grease control equipment requirement may be granted with the imposition of a Grease Disposal Mitigation Fee as described herein. The Department's determination to grant the waiver with a Grease Disposal Mitigation Fee will be based upon, but not limited to, evaluation of the following conditions:

(1) There is no adequate space for installation and / or maintenance of a grease control device.

(2) There is no adequate slope for gravity flow between kitchen plumbing fixtures and the grease control equipment and / or between the grease control equipment and the private collection lines or the public sewer.

(3) A variance from grease interceptor installation to allow alternative grease control equipment cannot be granted.

Application for Variance or Waiver of Requirement for Grease Interceptor

A Food Service Establishment may submit an application for variance or waiver from the grease interceptor requirement to the Director. The Food Service Establishment bears the burden of demonstrating, to the Director's reasonable satisfaction, that the installation of a grease interceptor is not feasible. Upon determination by the Director that reasons are sufficient to justify a variance or waiver, terms and conditions for issuance of the variance or waiver shall be set forth in writing. A variance or waiver may be revoked at

any time when any of the terms and conditions for its issuance is not satisfied or if the conditions upon which it was based change so that the justification no longer exists.

Grease Disposal Mitigation Fee

Food Service Establishments that operate without a grease control device may be required to pay an annual Grease Disposal Mitigation Fee to equitably cover the costs of increased maintenance of the sewer system as a result of the Food Service Establishment's inability to adequately remove FOG from its wastewater discharge. This section shall not be interpreted to allow the new construction of Food Service Establishments, or existing Food Service Establishments undergoing remodeling or change in operations, to operate without an approved grease control device unless the Director has determined that it is impossible or impracticable to install or operate a grease control device for the subject facility and has issued a waiver.

The Grease Disposal Mitigation Fee shall be established by resolution of the Board of Directors, and shall be based on the BOD and suspended solids contributed by Food Service Establishments operating without a grease control device.

Grease Interceptor Serving Multiple Food Service Establishments on a Single Parcel

Property owners of commercial properties or their official designee(s) shall be responsible for the installation and maintenance of any grease interceptor serving multiple Food Service Establishments that are located on a single parcel.

Food Service Establishment Classifications:

Class 1- NAICS 72213 Snack and Non alcoholic Beverage Bars including but not limited to deli, ice cream and frozen yogurt shops and NAICS 722330 Mobil Food Services
Class 2- NAICS 722211 Limited Service Restaurants
Class 3- NAICS 722210 Full Service Restaurants
Class 4- NAICS 722212 Cafeterias, Grills, and Buffets
Class 5- NAICS 722310 Food Service Contractors for institutional, governmental, commercial, or industrial locations and 722320 Caterers transporting food to an event and banquet halls with catering staff.

Grease Control Equipment Sizing and Specifications:

Grease control equipment shall be sized specifically for each FSE based on MWSD verified calculations, but in no case be less than the following:

- ***Class 1*: Retail Baked Goods, Deli, Ice Cream and Frozen Yogurt shops, Beverage Bars, Mobil Food Vendors- 20 gallons per minute / 40 pound AGRU.**
- ***Class 2*: Limited-Service Restaurants / Caterers – 20 gallons per minute / 40 pound AGRU.**
- ***Class 3*: Full Service Restaurants- 1,000 gallon capacity or equivalent Grease Interceptor**
- ***Class 4*: Buffet and Cafeteria Facilities- 1,500 gallon capacity or equivalent Grease Interceptor**

***Class 5*: Institutions (Schools, Hospitals, Prisons, etc) - 2,000 gallon capacity or equivalent Grease Interceptor**

To calculate the appropriate size GCE, the FSE's engineer, architect or contractor should use a formula that considers fixture units, storage capacity, type of facility, and a detention time of at least 30 minutes. The grease control equipment minimum acceptable size for the above listed FSE classifications (Class 1 through 5) must be met.

The Department will review GCE sizing information received from the Wastewater Grease Interceptor / Trap Application completed by the FSE's architect, contractor, engineer or other representative. The Department will approve or require additional grease control equipment volume, based on the type of FSE, the number of fixture units, and additional calculations (the criteria and formula used by MWSD for calculating GCE capacity requirements is based on the U.S. Environmental Protection Agency's EPA Procedure 2 Model; modified to meet WERF specifications). Grease interceptor capacity should not exceed 2,000 gallons for each interceptor tank. In the event that the grease interceptor calculated capacity exceeds 2,000 gallons, the FSE shall install an additional interceptor of the appropriate size. If additional baffled interceptors are required, they shall be installed in series; non-baffled interceptors shall be installed per the grease interceptor manufacturer's specifications.

Multiple tank grease interceptors shall be installed in such a manner as to ensure positive flow between the tanks at all times. Therefore, tanks designed to use a baffle as the primary means of flow control shall be installed in series with the influent (inlet) invert of each successive tank set at a minimum of 2 inches below the outlet invert of the preceding tank. Non-baffled tanks must have the NSF or Plumbing Drainage Institute certification and shall be installed per the manufacturer's specifications.

Grease Control Equipment Specifications

Grease Control Equipment must remove fats, oils, and grease to a level at or below that which is required by Sections 33-36 (A) and 33-36 (B) of the Murfreesboro City Code. Failure to comply will require enforcement action in accordance with the Murfreesboro Water and Sewer Department's Food Service Establishment Enforcement Response Guide.

Grease Traps

Grease traps are considered "under the sink" or "floor trap" units. New or replacement grease trap installations shall be of the Automatic Grease Recovery Unit (AGRU) type. Passive style grease trap installations shall not be permitted. Grease traps must have the NSF or Plumbing Drainage Institute certification. The minimum acceptable size is rated at 20 gpm / 40lbs. All grease traps must be installed in accordance with the manufacturer's specifications, which include the flow restrictor and venting prior to the discharge entering the grease trap. No additives (i.e. enzymes, bacteria, etc…) shall be added prior or directly to any chamber of the grease trap or any component of the plumbing connected to a grease control device.

Grease Trap Cleaning / Maintenance Requirements

1. ***All*** grease traps will have flow control restrictor and must be properly vented. Failure to have the flow restrictor and venting will be considered a violation.
2. Grease Trap minimum size requirement is a 20 gallon per minute / 40 pound capacity trap.
3. Existing Passive style Grease Traps will be cleaned completely of fats, oils, and grease and food solids at a minimum of every two (2) weeks, unless an alternate cleaning interval is authorized by the Director. If the FOG and food solid content of the grease trap is greater than 25%, then the grease trap must be cleaned every week, or as frequently as needed to prevent 25% of liquid capacity displaced by FOG and food solids (25 % Rule criterion).
4. Automatic Grease Recovery Unit (AGRU) style Grease Traps will be cleaned per the manufacturer's recommendations, which typically includes FOG disposal and removal of food solids from the strainer basket on a daily basis and weekly maintenance of the skimming mechanism.
5. Grease Trap waste should be sealed or placed in a container to prevent leachate from leaking and then lawfully disposed of.
6. Grease Trap waste should not be mixed with yellow grease in the grease recycle container.

Grease Interceptors

Piping Design

1. The inlet and outlet piping shall have 2-way cleanout tees installed
2. The inlet piping shall enter the receiving chamber 2 ½" above the invert of the outlet piping.
3. On the inlet pipe, inside the receiving chamber, a sanitary tee of the same size pipe in the vertical position with the top unplugged shall be provided as a turndown. To provide air circulation and to prevent "air lock", a pipe (nipple) installed in the top tee shall extend 2 inches, but not more than 6 inches, above the interceptor ceiling. A pipe installed in the bottom of the tee shall extend to within 18" of the floor of the interceptor. ***See illustration.***
4. The outlet piping shall be no smaller than the inlet piping, but in no case smaller than 4" ID.
5. The outlet piping shall extend to 12" above the floor of the interceptor and shall be made of a non-collapsible material, preferably schedule 40 PVC pipe.
6. The outlet piping shall contain a tee installed vertically with a pipe (nipple) installed in the top of the tee to extend 2 inches but not more than 6 inches above the interceptor ceiling. ***See illustration***

7. *All pipe penetrations and connections to the interceptor and the sampling box shall be made with resilient connectors Openings in the sidewall for pipe shall be precast or cored The opening shall be of a size to allow for lateral or vertical adjustments through 20 degrees.*
8. *A resilient connector, such as Kor-N-Seal or approved alternative, between the interceptors and pipes shall be placed in the precast or cored opening .The resilient connector shall be molded from a EDPM or polyisoprene compound meeting the requirements set forth in ASTM C923.* An external corrosion resistant stainless steel band shall be used to seal around the pipe. The void between the pipe and the connector shall be filled (on the inside only) with grout or a flexible gasket material such as RUB R NEK LTM or an approved equal.

Baffles

1. Grease interceptors designed with an internal baffle as the primary means for the effective and proper operation of the grease interceptor, shall have a non-flexing (i.e. concrete, steel, etc.) baffle the full width of the interceptor, sealed to the walls and the floor, and extend from the floor to within 2" but not more than 6 "from the ceiling. The baffle shall have a minimum of one (1) opening at least 6" in diameter, centered from the walls; but preferably three (3) openings at least 6" in diameter equally dispersed across the baffle wall. The openings shall be 24 to 30" from the bottom. Slot style openings that are at least 6" in height and at least 24" in length, and centered from the sidewalls are preferable. ***See illustration.***
2. The baffle shall divide the grease interceptor as follows: The influent (inlet) compartment shall be 2/3 of the total liquid capacity with the effluent (outlet) compartment at 1/3 liquid capacity of the interceptor.
3. Grease interceptors designed to use a device other than a baffle as the primary means for flow control must have the NSF or Plumbing Drainage Institute certification.

Access Openings (Manholes)

1. Access to grease interceptors shall be provided by a minimum of 1 manhole per interceptor division (baffle chamber) and of 24-inch minimum dimensions terminating 1 inch above finished grade or 2 inches above finished grade when located in natural terrain such as grass or landscape beds with a cast iron frame and cover. One manhole shall be located above the influent (inlet) Tee hatch and the other manhole shall be located above the effluent (outlet) Tee hatch. A minimum of 24" of clear opening above each manhole access shall be maintained to facilitate maintenance, cleaning, pumping, and inspections.
2. The manholes are to be accessible at all times for inspection by the Department or other authorities having jurisdiction.

Sampling Port

A sampling port will be installed after the effluent (or outlet) pipe of the grease interceptor. The opening of the sampling port will be a minimum 11" x 13" and sufficient to allow sampling using a 1 liter glass container. The drop from the grease interceptor effluent pipe to the bottom of the sampling port will be a minimum of 12", unless approved otherwise by the Director.

Additional Requirements

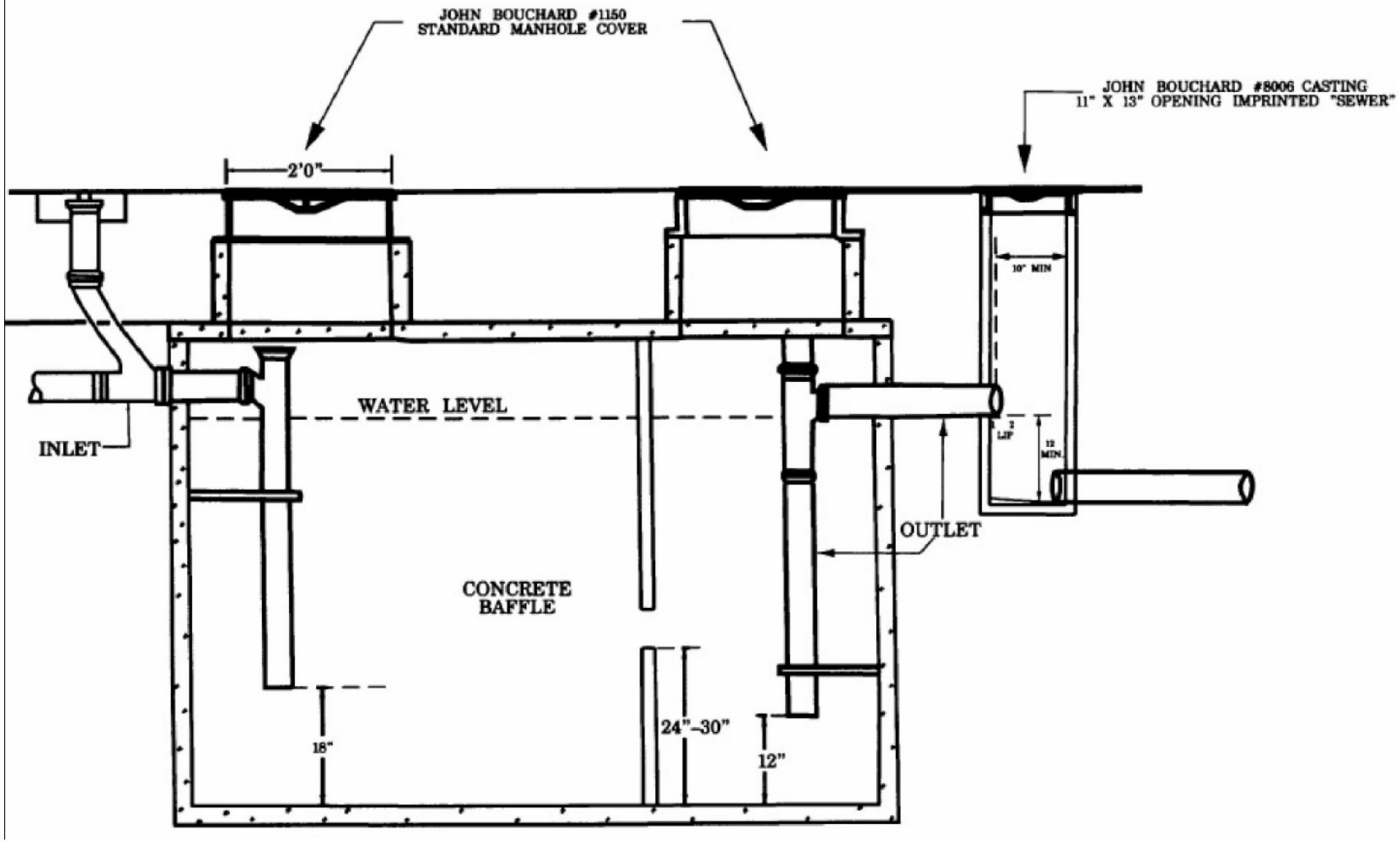
Watertight – Grease interceptors and sampling ports shall be constructed to be watertight. A static water test shall be conducted by the installer and timed so as to permit visual verification by the Department. The water test shall consist of plugging the inlet of the tank (or first tank in series, if applicable) and the outlet of the sampling port, filling the tank(s) with water to the top of the casting on the manholes and sampling port and let stand for a minimum one hour without visible leakage or drop in the water level in the tank(s).
In the alternative to water testing vacuum testing is acceptable. Testing shall be in accordance with Section 5.1.2 of American National Standard for prefabricated Gravity Grease Interceptors, IAPMO/ANSI Z1001 most current edition. Certification by the plumbing contractor shall be supplied to the Department prior to final approval of grease control equipment.

Location – Grease Interceptors shall be located so as to be readily accessible for cleaning, maintenance and inspections. They should be located close to the FOG point of discharge and / or in a location approved by the Director.

Responsibility – Removal of the grease from the wastewater routed to a public or private sanitary system; and maintenance of the structural integrity of the grease control device (traffic rated, water tight, etc.) is the responsibility of the FOG waste generator. In the absence of the FOG waste generator, the owner or other duly authorized representative of any such real property shall assume all grease control equipment maintenance responsibilities.

Construction Material – Grease Interceptors shall be constructed of sound durable materials, not subject to excessive corrosion or decay, and shall be water and gas tight. Each interceptor shall be structurally designed to withstand any anticipated load to be placed on the interceptor (i.e. vehicular traffic rating for parking, service or driving areas) or of a design approved by the Director.

GREASE TRAP WITH GREASE SAMPLING BOX



Grease Interceptor Cleaning / Maintenance Requirements

1. Grease Interceptor minimum size will be 1,000 gallons or equivalence in capacity and maximum size will be 2,000 gallons or equivalence in capacity. If the FSE needs additional capacity, then grease interceptors will be installed as follows: Baffled Grease Interceptors - In Series; Non-baffled Grease Interceptors - per the manufacturer's specifications.

2. Partial pump of interceptor contents or on-site pump & treatment of interceptor contents will **not** be allowed due to reintroduction of fats, oils and grease to the interceptor and pursuant to the Code Federal Regulation (CFR) § 403.5 (b) (8), which states "*Specific prohibitions.* In addition, the following pollutants shall not be introduced into a POTW: Any trucked or hauled pollutants, except at discharge points designated by the POTW".

3. Grease interceptors must be pumped-in-full at minimum every 90 days, more often as needed or when the total accumulations of surface FOG (including floating solids) and settled solids reaches twenty-five percent (25%) of the grease interceptor's overall liquid depth. This criterion is referred to as the "25 Percent Rule". At no time, shall the capacity exceed the 25% criteria or the cleaning frequency exceed 90 days unless an alternate cleaning frequency has been approved by the Director. Some existing FSE's in Class 2 through 5 as defined earlier by NAICS will need to consider pumping more often to meet this requirement. Requests for variances to the 90 day complete pump requirement may be granted on a case by case situation with submittal by the FSE documenting proof of the proposed frequency.

4. Grease interceptor effluent (outlet) Tee will be inspected during cleaning and maintenance and the condition noted by the grease waste hauler's company or individual conducting the maintenance. Effluent Tee's that are loose, defective, or not attached must be repaired or replaced immediately.

5. Grease Interceptors must have access manholes over the influent (inlet) Tee and effluent (outlet) Tee for inspection and ease of cleaning / maintenance. Access manholes will be provided for all separate compartments of interceptors for complete cleaning (i.e. interceptor with two main baffles or three compartments will have access manholes at each compartment) and are to be accessible at all times.

6. A record of all servicing of the grease interceptor shall be kept on file at the FSE and shall be accessible to City inspectors during normal business hours. Such records shall include the dates, quantities pumped, condition, any repairs and the identity of the person or business that conducted the service. The Director may require such records to be submitted directly to the Department.

Food Service Establishment Inspections and Surveillance

Based on Murfreesboro City Code Section 33-39, the Murfreesboro Water & Sewer Department Director and other duly authorized employees of the City, the Tennessee Department of Conservation and Environment or the U.S. Environmental Protection Agency, bearing proper credentials and identification, shall be permitted to enter upon all properties during normal business hours for the purpose of inspection, observation, measurement, sampling and testing. The Murfreesboro Water & Sewer Department will conduct inspections of the FSE operation, including grease interceptor or grease trap inspection, inspection of records, inventory of kitchen equipment and plumbing fixtures, and conduct or require the FSE to conduct any additional monitoring of the Food Service Establishment to determine compliance with the FOG Management Policy.

Falsifying Information or Tampering with Process

It shall be unlawful to make any false statement, representation, record, report, plan or other document that is filed with the Department, or to tamper with or knowingly render inoperable any grease control device, monitoring device, method or access point required under this policy.

Fees

As necessary and as approved by the City Council, the Murfreesboro Water & Sewer Department may charge food service establishments for surveillance fees, inspection fees and for reimbursement for the FOG program costs. This in addition to reimbursement of costs related to unclogging blockages as allowed by City Code.

Enforcement Action

Enforcement action against the FSE may be taken for various reasons including but not limited to: failure to clean or pump grease control equipment; failure to maintain grease control equipment including inspection and installation of properly functioning effluent-Tee and baffles; failure to install grease control equipment; failure to control FOG discharge from the FSE; contributing to a sewer line blockage or obstruction; contributing to a Sanitary Sewer Overflow; use of additives in such quantities so that FOG is pushed downstream of the FSE. Enforcement action and penalties for FSE's that

are not in compliance with the Fats, Oils and Grease Management Policy are provided in the Department's FSE Enforcement Response Guide.

Based on *Murfreesboro City Code, Section 33-40. Penalties and damages*, the following apply:

Fats, Oils and Grease blockage in sewer line caused by a FSE:

(1) First offense – All costs associated with cleaning the sewer lines and restoring service to the affected areas, plus any damages as may be assessed under Section 33-43.
(2) Successive occurrences within twelve months of the previous occurrence - A One Thousand Dollar ($1,000.00) penalty plus all costs associated with cleaning the sewer lines and restoring service to the affected areas, plus any damages as may be assessed under Section 33-43.

FSE failure to maintain GCE after Notification or NOV due date:

Whenever it is determined that the frequency of pumping of a grease interceptor is inadequate, the Director shall notify the establishment of the intent of the department to have the grease interceptor pumped at a specified date, generally ten (10) working days from the notice if not pumped by the FSE prior to the specified date. Whenever the grease interceptor is pumped by the Department or its contractor, the customer shall be charged twice the actual cost of pumpage. Charges shall be added to the customer's regular bill for sewer service or may be billed separately.

Additional Enforcement Actions and Penalties

Enforcement action and penalties for food service establishments with deficiencies and not in compliance with the Department's FOG Management Policy will be as per the ***Murfreesboro Water & Wastewater Food Service Establishment Enforcement Response Guide***.

Fats, Oil, and Grease (FOG) Best Management Practices (BMPs)

Prevent FOG Blockages in the Sanitary Sewer System

BMP	Reason	Benefits
Train kitchen staff and other employees about how they can help ensure BMPs are implemented.	People are more willing to support an effort if they understand the basis for it.	All of the subsequent benefits of BMPs will have a better chance of being implemented.
Post "**No Grease**" signs above sinks and on the front of dishwashers.	Signs serve as a constant reminder for staff working in kitchens.	These reminders will help minimize grease discharge to the traps and interceptors and reduce the cost of cleaning and disposal.
Use water temperatures less than 140°F in all sinks, especially in pre-rinse sinks before a mechanical dishwasher, which requires a minimum temperature of 160°F.	Temperatures in excess of 140°F will dissolve grease, but grease can re-congeal or solidify in the sewer collection system as the water cools.	The food service establishment will reduce its costs for the energy – gas or electric – for heating the water.
Use a 3 compartment sink dishwashing system, which includes sinks for washing, rinsing, and sanitizing in a 50-100 ppm bleach solution. Water temperatures are less than 140°F. (See above)	The 3 compartment sink system uses water temperatures less than 140°F where a mechanical dishwasher requires a minimum temperature of 160°F. (See above)	The food service establishment will reduce its costs for the energy - gas or electric - for heating the water for the mechanical dishwasher and for operating the dishwasher.
Recycle waste cooking oil.	This is a cost recovery opportunity.	The FSE is paid for the waste material and it reduces the amount of garbage paid be hauled away.
"Dry wipe" pots, pans, and dishware prior to dishwashing.	The grease and food that remains in pots, pans, and dishware will likely go to the landfill instead of the grease traps and interceptors.	This will reduce the amount of material going to grease traps and interceptors, which will require less frequent cleaning, reducing maintenance costs
Dispose of food waste by recycling and/or solid waste removal.	Some recyclers take food waste for animal feed. In the absence of such recyclers, the food waste can be disposed as solid waste in landfills by solid waste haulers.	Recycling of food wastes will reduce the cost of solid waste disposal. Disposal by solid waste reduces the frequency and cost of grease trap/interceptor cleaning.

Fats, Oil, and Grease (FOG) Best Management Practices (BMPs)

Properly Maintain Devices to Prevent Introduction into the Sewer System

BMP	Reason	Benefits
Observe all grease trap or interceptor cleaning / maintenance activities to ensure the device is properly operating and serviced.	Pumpers may take shortcuts. By monitoring the cleaning operation, the FSE manager can ensure that it is consistent with the correct cleaning procedures.	The FSE ensured it is getting full value for the cost of cleaning. Otherwise the establishment may be paying more often than necessary.
Clean undersink and floor grease traps (GT's) at a minimum of every 2 weeks, more often as needed. If grease traps are more than 25% full when cleaned bi-weekly, the cleaning frequency needs to be increased. Mix grease trap wastes with a dry oil absorbent material such as "kitty litter" before disposal.	Undersink and floor GT's have less volume than Grease Interceptors (GI's). Bi-weekly cleaning of undersink and floor GT will reduce the FOG concentration level being discharged If the FSE does not have a GI, an undersink trap is the only means of controlling grease. Unless there is adequate protection, MWSD requires installation of a GI. The disposal of liquid wastes with solid waste is prohibited.	This will reduce the FOG concentration level being discharged to the City's sanitary sewerage system. This will help maintain FOG concentration levels that are below the maximum allowable FOG discharge limit established by the Murfreesboro City Code. The FSE can avoid the high costs associated with the containment and cleanup of FOG spills and overflows and penalties or fines that may result from an illegal discharge.
Clean Grease Interceptors (GI's) at a minimum of every 90 days, more often as needed. Follow the" 25% Rule" Do not allow the GI top grease layers and the bottom food solids layers in combination to exceed 25% of the total GI liquid capacity at any time.	GIs must be cleaned at a minimum of every 90 days to ensure that the grease accumulation does not cause the interceptor to discharge concentrations of FOG that exceed the maximum allowable limit established by the MWSD FOG Policy. Cleaning frequency is determined by the type of establishment, interceptor size, and the volume of flow discharged by the FSE.	Routine cleaning prevents clogging of the FSE sewer drain line and the City's sewer lines, avoiding the high costs associated with a blockage or overflow. The FSE will incur all costs associated with clearing both private and public sewer lines of FOG related blockages and cleanup of overflows.
Keep a maintenance log.	A log serves as a record of the frequency of cleaning the interceptor. It is required by MWSD to ensure that maintenance is performed on a regular basis.	The maintenance log serves as a record of cleaning frequency and can help the establishment manager optimize cleaning frequency to reduce cost.

Fats, Oil, and Grease (FOG) Best Management Practices (BMPs)

Prevent FOG From Entering Creeks and Streams Through the Storm Drain System

BMP	Reason	Benefits
Cover outdoor grease recycling containers. The City of Murfreesboro is required to enforce a Storm water Runoff Management Program.	Uncovered grease recycling containers can collect rainwater. Since grease floats, accumulated rainwater can cause it to overflow onto the ground and into the stormwater system and nearby streams.	Reducing FOG discharge to storm drains helps to improve the water quality of receiving streams The FSE can avoid the high costs associated with the containment and cleanup of FOG spills and overflows and penalties or fines that may result from an illegal discharge.
Locate grease recycling containers away from storm drain catch basins.	The farther from the catch basin, the more time someone has to clean up spills or drainage prior to entering storm drains. Be aware of FOG spilled while carrying waste to the grease recycling containers as well as any that may drip from the grease recycling containers.	Reducing FOG discharge to storm drains helps to improve the water quality of receiving streams The FSE can avoid the high costs associated with the containment and cleanup of FOG spills and overflows and penalties or fines that may result from an illegal discharge.
Use absorbent pads or other material in the catch basins if grease containers are nearby. Do not use free-flowing absorbents such as “kitty litter” or sawdust.	Absorbent pads and other materials can serve as an effective barrier to grease and oil entering the storm drain system.	Reducing FOG discharge to storm drains helps to improve the water quality of receiving streams The FSE can avoid the high costs associated with the containment and cleanup of FOG spills and overflows and penalties or fines that may result from an illegal discharge.
Use absorbent pads or other material to clean up spills around outdoor equipment, containers or dumpsters. Do not use free-flowing absorbents such as "kitty litter" or sawdust.	Absorbent pads or materials can help clean up FOG spilled on the ground and prevent it from flowing to the storm drain system. Free-flowing absorbents may wash into the storm drain system.	Reducing FOG discharge to storm drains helps to improve the water quality of receiving streams The FSE can avoid the high costs associated with the containment and cleanup of FOG spills and overflows and penalties or fines that may result from an illegal discharge.
Routinely clean kitchen exhaust system filters.	If FOG escapes through the kitchen exhaust system, it can accumulate on the roof of the establishment and eventually enter the storm drain system when it rains.	Reducing FOG discharge to storm drains helps to improve the water quality of receiving streams The FSE can avoid the high costs associated with the containment and cleanup of FOG spills and overflows and penalties or fines that may result from an illegal discharge.

General Prohibitions Relating to Discharge of FOG

Prohibition	Basis
Do not discharge FOG in concentrations that will cause an obstruction in a sewer, or pass through or interference at a wastewater treatment facility.	Grease can solidify and trap other solid particles to completely plug the wastewater collection system.
Do not discharge grease, shredded garbage, animal guts or tissues, paunch manure, bones, hide, hair, or entrails.	These materials in combination or alone can cause blockages and other operations and maintenance problems in the wastewater collection and treatment system.
Do not discharge wastewater with temperatures in excess of 140°F to any grease control device. This includes water from mechanical dishwashers that have a minimum required temperature of 160°F.	Temperatures in excess of 140°F will dissolve grease, which may re-congeal as the water cools and cause blockages in the collection system. High temperature water, such as from a dishwasher, may be discharged to a GI if there is sufficient volume to allow time for the grease and water to separate and be retained therein. The high volume also provides dilution of the detergents in the dishwasher waste.
Do not discharge food wastes and scraps into any type of grease removal device.	Food wastes will greatly reduce the capacity of the device for retaining grease and may increase the possibility of blockages.
Do not discharge caustics, acids, solvents, or other emulsifying agents.	Though emulsifying agents can dissolve solidified grease, the grease can re-congeal further downstream in the sewer collection system. These substances can have harmful effects on the wastewater treatment system and can be a hazard to employees working in the collection system.
Do not discharge FOG containing substances that will become viscous between 32°F (0°C) and 150°F (65°C).	The temperatures shown are temperatures that can occur in the wastewater collection and treatment system. If these substances congeal, solidify, or become too viscous, they can cause blockages and other operations and maintenance problems.
Do not utilize biological agents for grease remediation.	The agents may disrupt the biological treatment process at the wastewater treatment plant.
Do not clean equipment outdoors in an area where water can flow to the gutter, storm drain, or street.	Grease and dirt will be washed off the equipment and enter the storm drain system and flow to nearby streams.