

PART D

GREASE INTERCEPTOR/GREASE TRAP AND SAND/OIL INTERCEPTOR REGULATIONS

ARTICLE II

GREASE INTERCEPTOR/GREASE TRAP REGULATION

2.01 General

- a. A Grease Interceptor or Grease Trap shall be required and provided when, in the judgment of the District, it or they are necessary for the proper handling of liquid wastes containing grease or solids which may be harmful to or cause obstruction of the publicly owned wastewater collection system, or interfere with the operation of the publicly owned treatment works or as otherwise required by a GOPP. The District will determine in its sole discretion whether a Grease Interceptor or Grease Trap must be installed and is suitable for installation. On a general basis Grease Interceptors will be required for all Affected Property as described in Section 1.01(a)(1) through (3) of this Part D.
- b. In addition to a Grease Trap/Grease Interceptor, all GOPP holders using frying oil must have and use a grease/oil reclamation container with a secure cover and spill containment on-site. The preferred container shall be as provided by a professional/commercial waste reclamation business.
- c. An adequate Grease Interceptor or Grease Trap shall be installed on the wastewater drainage system from Affected Property. The adequacy of the Grease Interceptor or Grease Trap shall be determined by compliance with the design, sizing, and other requirements of this regulation.
 - (1) All drains from the kitchen, food preparation, and dishwashing areas shall be connected to a Grease Interceptor or Grease Trap. Fixtures to be connected include, but are not limited to, scullery sinks, pot and pan sinks, dishwashing machines, soup kettles, and floor drains located in areas where grease containing materials may exist.
 - (2) When deemed necessary by the District, garbage disposals (garbage grinders) may be required to be connected to an approved Grease Interceptor. Connection of garbage disposals (garbage grinders) to Grease Traps will typically not be permitted.
 - (3) Toilets, urinals and similar fixtures shall not waste through a Grease Interceptor or Grease Trap. Such fixtures shall be plumbed directly into the building sewer and waste system.
- d. A variance as to the requirement for a Grease Interceptor or Grease Trap on any non-residential structure may be granted after due consideration by the District for good cause shown including, without limitation, the particular hardship and unique

circumstances of the customer which are not brought about as a result of the customer's acts or omissions. The granting of any variance shall be at the sole discretion of the District based upon the facts and circumstances of each request.

2.02 Definitions

- a. "Affected Property" has the meaning set forth in Section 1.01(a) of Article I of this Part D.
- b. "Grease Interceptor" shall mean a unit of at least 1000 gallons capacity designed to retain grease from one or more fixtures and which shall be located remote from the fixtures being served, typically outside the building being served. This is the preferred unit of choice by the District.
- c. "Grease Trap" shall mean a unit designed to retain grease from one to a maximum of four fixtures and which may be located inside the building being served. Generally these types of units will not be permitted by the District.
 - (1) The smallest Grease Trap permitted shall have a minimum grease retention capacity of 100 pounds and shall provide a hydraulic retention time of at least 15 minutes at the design flow rate.
 - (2) No Grease Trap shall be installed which has a rated capacity of less than 30 gpm.
 - (3) The use of larger capacity Grease Traps is encouraged whenever possible in that larger traps work more efficiently. In resolving any question of capacity of the Grease Trap, any uncertainties shall be resolved in favor of the larger capacity Grease Trap.
- d. Fixture Unit Equivalent (FUE)" shall mean a value which permits the comparison of different sized fixtures based on the drainage load produced.

One (1) FUE = Discharge flow rate of 7.5 gpm.

2.03 Design and Sizing

- a. The design and sizing of Grease Interceptors and Grease Traps shall be in accordance with the current edition of the Uniform Plumbing Code (UPC) as utilized by the local building permitting authority and these Regulations, and shall be designed, sized, installed, maintained and operated so as to accomplish their intended purpose of intercepting the grease and solids from the customer's waste water and preventing the discharge of such grease and solids to the District's waste water treatment plant.
- b. The size, type and location of each Grease Interceptor and Grease Trap shall be approved by the District, in accordance with these Regulations. Except where otherwise specifically permitted, no wastes other than those requiring separation shall be discharged into any Grease Interceptors or Grease Traps. One set of plans, including complete mechanical and plumbing sections shall be submitted to the

District for approval prior to construction. Such plans shall include the size, type and location of each interceptor or trap. Such approval shall not exempt the user from compliance with any applicable code, ordinance, rule, regulation or order of any governmental authority. Such approval shall not be construed as or act as a guarantee or assurance that any discharge is or will be in compliance with any applicable code, ordinance, rule, regulation, or order or any governmental authority. Any subsequent alterations or additions to such facilities shall not be made without due notice to and prior approval of the District.

c. Design

- (1) All waste shall enter the Grease Interceptor or Grease Trap through the inlet pipe only.
- (2) Grease Interceptors and Grease Traps shall be so designed and located as to be readily accessible for cleaning, and shall have a water seal of not less than six (6) inches for Grease Interceptors and two (2) inches or the diameter of the outlet, whichever is greater, for Grease Traps.
- (3) Grease Interceptors shall be constructed in accordance with the design specifications contained herein, shall be approved by the District and shall have a minimum of two (2) compartments with fittings designed for grease retention. There shall be a minimum of two (2) manholes to provide access for cleaning and inspection of all fixtures and compartments of the interceptor, a minimum of one (1) per ten (10) feet of interceptor length. In the case of smaller, or circular interceptors, where it is not practical to install two manholes, a single manhole shall be located so as to permit entrance to the first compartment, and inspection of the second. All areas of the second compartment shall be accessible for cleaning. Manhole covers shall be gastight in construction having a minimum opening dimension of twenty (20) inches. In areas where traffic may exist, the interceptor shall be designed to have adequate reinforcement and cover, meeting HS-20 load specifications.
- (4) A flow control device shall not be required preceding a Grease Interceptor.
- (5) Grease Traps shall be equipped with a flow control or restricting device installed in a readily accessible and visible location ahead of the Grease Trap. Flow control devices shall be designed and rated such that the flow through such a device shall at no time be greater than the rated capacity of the Grease Trap. No flow control devices having adjustable or removable parts will be permitted.
- (6) If an existing Grease Trap does not meet the design and sizing criteria as set forth, the Grease Trap shall be replaced with a properly designed and sized Grease Trap or Grease Interceptor.
- (7) Upon change of ownership of any existing facility which would be required to have a Grease Trap or Grease Interceptor under these Regulations, the applicant for sanitary sewer service shall demonstrate that a properly sized and functioning Grease Trap or Grease Interceptor is installed.

- (8) Grease Interceptors and Grease Traps shall be so designed that they will not become air bound if closed covers are used. The tank and the discharge line shall each be vented, and the vents shall not tie together less than 42 inches above the tank lid elevation.
- (9) An effluent sampling box shall be provided on the discharge of each Grease Interceptor or Grease Trap where so required by the District.

d. Sizing Criteria

- (1) Grease Interceptors: When determining the minimum size of Grease Interceptor required, the following shall be considered by the District and the District has the sole discretion to determine which sizing method is appropriate under the circumstances:
 - a) The minimum acceptable volume shall be not less than one thousand (1000) gallons.
 - b) The size of the interceptor shall be based on the maximum number of meals serviced at the maximum periods of the day (either breakfast lunch or dinner). Volume, in gallons, of the interceptor shall be 2 ½ gallons times the maximum meals served during the busiest period of the day.
 - c) An alternate method of determining the size of the Grease Interceptor is to multiply seating capacity times a turnover constant of 1.6 times 2 ½ gallons. Seating capacity can be approximated, using ten (10) square feet of dining area per person. (VOLUME = Seating Capacity x 1.6 x 2.5 gallons.)
 - d) The size of the Grease Interceptor may also determined by the following formula:

Interceptor size (liquid capacity in gallons) = Number of Meals Served Per Peak Hour x Waste Flow Rate x Retention Time X Storage Factor, where:

(i) Number of Meals served per peak hour = Seating capacity x Occupancy Factor (0.80) x Meals Per Hour Per Seat

(ii) Waste Flow Rate =

With dishwashing machine	6 gallons
Without dishwashing machine	5 gallons
Food waste disposal	1 gallon

(iii) Retention time = 1.0 hours

(iv) Storage Factor =

Fully equipped commercial kitchen:	
8 hour operation	1
16 hour operation	2
24 hour operation	3

Single service kitchen: 1.5

- e) An appropriate volume may be determined by multiplying the total rate of flow in gallons per minute from each fixture required to be connected to the interceptor times a minimum retention time of not less than fifteen (15) minutes, the resulting volume expressed in gallons.
- (2) Grease Traps: When determining the minimum size of Grease Traps required, the following shall be considered by the District and the District has the sole discretion to determine which sizing method is appropriate under the circumstances:
- a) Fixture Capacity Method: Under this method, the physical size of each fixture compartment to be connected to the Grease Trap shall be measured and the capacity determined. The drainage load in gallons shall then be computed assuming the drainage load to be equal to 0.75 times the total physical capacity. The sum of the drainage loads for each fixture compartment to be connected to a single Grease Trap will be the total Grease Trap drainage load. The total Grease Trap drainage load is then divided by the drainage period for the fixture compartments connected to determine the flow rate to the Grease Trap in gpm. Multiply the Grease Trap flow rate thus determined, or the rated capacity of the flow control device, by the minimum retention time (15 minutes) to determine the required liquid capacity of Grease Trap to be installed.
- b) Fixture Unit Method: Under this method the fixture compartment outlet or trap arm size shall be utilized to determine the fixture compartment drainage load in gpm, assuming one (1) fixture unit equivalent produces a flow rate of 7.5 gpm. The sum of the drainage loads for each fixture compartment to be connected to a single Grease Trap or the rated capacity of the flow control device will be the total Grease Trap drainage load in gpm. Multiply this total drainage load in gpm by the minimum retention time (15 minutes) to determine the required liquid capacity of the Grease Trap to be installed.

The following fixture unit equivalent values shall be utilized when sizing Grease Traps under the Fixture Unit Method:

<u>Fixture Outlet Trap or Trap Arm Size</u>	<u>Fixture Unit Equivalent Value</u>
1-1/4"	1
1-1/2"	3
2"	4
2-1/2"	5
3"	6
4"	8

- c) Selection of the appropriate size for a Grease Trap is dependent on the drainage period of the fixtures connected to the trap. By adjusting the fixture drainage period through use of a flow control device, (i) a smaller Grease Trap could be utilized for a given fixture size or capacity or (ii) multiple fixtures could be connected to the same Grease Trap.
- d) Where the required Grease Trap size would exceed that which is commercially available, either multiple Grease Traps shall be installed in parallel or a Grease Interceptor shall be utilized.

2.04 Installation

- a. Installation of Grease Interceptors and Grease Traps shall be in accordance with the with the current edition of the Uniform Plumbing Code (UPC) as utilized by the local building permitting authority and these Regulations and shall be accomplished in a workmanlike manner in compliance with the design and sizing requirements hereunder.
- b. The installation of Grease Interceptors and Grease Traps shall be accomplished by licensed plumbers with documented experience in the installation of such devices.
- c. Each Grease Interceptor and Grease Trap shall be readily accessible for inspection by the District and for servicing and maintaining in proper working condition. The use of ladders or the removal of bulky equipment in order to inspect or service interceptors and traps shall constitute a violation of accessibility. Where feasible, all interceptors shall be located outside of the facility served. Interceptors may not be installed in any part of a building where food is handled. The District representatives shall be allowed access to any Affected Property at all reasonable times for the purpose of inspecting or sampling any Grease Trap or interceptor for compliance with the terms of the GOPP.
- d. Location of all interceptors and traps shall be approved by the District, and shall be shown on the GOPP.
- e. No dishwasher shall be connected to or discharge into any Grease Interceptor or Grease Trap of less than 1,000 gallons capacity which is utilized by other fixtures. Automatic dishwashing units shall be plumbed through their own properly sized

Grease Interceptor, properly sized Grease Trap or directly into the building sewer and waste system.

- f. No food grinder or disposal unit shall be connected to or discharge into any Grease Trap. Such units shall be plumbed through a properly sized Grease Interceptor or directly into the building sewer and waste system.
- g. All fixtures not equipped with a garbage disposal (garbage grinder) which are connected to a Grease Interceptor shall be equipped with a fixed or removable mesh or screen which shall catch garbage and food debris and prevent it from entering the Grease Interceptor.
- h. Wastes in excess of 140 degrees Fahrenheit shall not be discharged into a Grease Interceptor or Grease Trap, and liquid discharge from a Grease Interceptor or Grease Trap shall not exceed 70 degrees Fahrenheit.

2.05 Maintenance

- a. Any Affected Property subject to the terms of a GOPP shall maintain the efficient operation of the Grease Trap or Grease Interceptor, which shall include, among other things, the regular periodic cleaning and removal of accumulated grease or oils, which shall be disposed of properly without reintroduction into the District's collection system.
- b. Maintenance of Grease Interceptors and Grease Traps shall be done only by a business/professional normally engaged in the servicing of such plumbing fixtures. An individual property owner will not be permitted to accomplish maintenance specified by this Regulation.
- c. The District shall provide a customer and/or a maintenance business with a form for recording Grease Interceptor/Grease Trap maintenance. The maintenance business and customer shall provide one copy of the completed form to the District immediately following accomplishment of maintenance of any Grease Interceptor or Grease Trap within the District.
- d. As a minimum, any Grease Interceptor in service in the District shall be serviced at a maximum interval of 120 days.
 - (1) A variance from this requirement may be obtained when the owner can confirm that there is no normal use during any given 120 calendar day period. With written authorization from the District Board, the maximum time variance between services is 365 calendar days.
 - (2) The District may inspect the interceptor and outlet and if it is deemed necessary by the District, more frequent servicing and maintenance will be required.
- e. As a minimum, any Grease Trap in service in the District shall be serviced at a maximum interval of 30 days.

- (1) A variance from this requirement may be obtained when the owner can confirm that there is no normal use during any given 30 calendar day period.
 - (2) The District may inspect the trap and outlet and if it is deemed necessary by the District, more frequent servicing and maintenance will be required.
- f. Biological treatment shall not be a substitute for the servicing of Grease Interceptors and Grease Traps at the frequency determined by the District. Emulsification of oil and grease with enzyme treatments only delays physical separation. Oil and grease may then separate down stream and cause clogging problems in the collection system. A Grease Interceptor and Grease Trap using biological treatment requires continuous monitoring, maintenance, and inoculation of the bacterial cultures.
- g. The District may inspect Grease Interceptors and Grease Traps monthly to determine the load on the fixture and the effectiveness of maintenance activities. The District will inventory all Grease Interceptors and Grease Traps in their service area and document the inspections of these interceptors and traps. These inspections may determine that more frequent maintenance than previously specified is required, in which case the District shall require and the property owner shall undertake more frequent maintenance.
- h. Existing sources not connected to a Grease Interceptor or Grease Trap and contribute oil and grease to the District's waste stream and collection system will be identified through the District's inspection program. Once these sources are identified, they will be required to install a Grease Interceptor or Grease Trap and maintain it according to these guidelines. In the time before a Grease Interceptor or Grease Trap can be installed the District will require these businesses to implement Best Management Practices (BMPs) to keep oil and grease out of the sanitary sewer system:
- (1) Scrape food from plates into garbage cans.
 - (2) Pre-wash plates by spraying them off with cold water over a small mesh catch basin positioned over a drain. This catch basin should be cleaned into a garbage can as needed.
 - (3) Pour all liquid oil and grease from pots into waste grease bucket stored at the pot washing sink. Heavy solid build-up of oil and grease on pots and pans should be scraped off into a waste grease bucket.
 - (4) Other kitchen practices identified by the District and/or facility which will decrease the point source discharge of oil and grease.

2.06 Responsibility, Fines, and Third-Party Compensation

- a. Property owners and lessees shall be jointly and severally responsible for cleaning Grease Interceptors and Grease Traps for maintaining the Grease Interceptors and Grease Traps in efficient operating condition at all times, and for otherwise complying with the provisions of these rules and regulations. Grease Interceptors and Grease

Traps shall be maintained by regularly scheduled removal of the accumulated grease and solids so that they will properly operate as intended to intercept the grease and solids from the customer's waste water and prevent the discharge of grease and solids to the District's waste water treatment plant. This maintenance shall be performed in a workmanlike manner before the retention capacity of the interceptor or trap is exceeded. Detailed and accurate records of maintenance shall be maintained on-site and shall be provided to and available to the District upon request. Such maintenance records shall be in the form as required from time to time by the manager of the District. The records shall include detailed information relating to the amount of grease removed compared to the size of the Grease Interceptor/trap.

- b. A copy of the invoice from the business/professional reporting the date that the Grease Interceptor or trap was cleaned, the amount of grease, oil or sand removed and a recommendation of how frequently the interceptor should be cleaned must be sent to the District office after each cleaning. A copy of all cleaning invoices are to be on file at the business or facility being served and available to the District upon request.
- c. The District reserves the right to revoke the GOPP and levy fines to such facilities that do not, in the opinion of the District's Manager or his or her designee, conform to the District's grease regulations, including the failure to install the required type and size of Grease Trap or interceptor required under the GOPP, failure to provide access as required by this section, failure to abide by the record keeping provisions of this section or any other failure to adhere to the requirements or conditions of the GOPP.
- d. Compensation shall be paid to any surrounding businesses and/or homeowners for damage resulting from any non-compliance of the District's regulations.
- e. Any extraordinary cost incurred by the District due to interference, damage or special processing necessary in the treatment and/or collection system shall be paid by the business causing such extraordinary costs. The direct cost of all labor, equipment and materials incurred in rectifying the interference or damage shall be billed directly to the business by the District.

2.07 Sewer Use Regulations

- a. This regulation forms a part of the Sewer Use Regulations of the District. Enforcement of this regulation is governed by the express terms hereof and the enforcement provisions of Part A, Article XII of the Sewer Use Regulations, which is incorporated by reference, including, without limitation, those provisions for administrative violations, violation of discharge limitations, enforcement procedures, penalties, field observations, and extra monitoring charges. Any violation of this regulation for Grease Interceptors and Grease Traps shall be considered a discharge violation, major violation, under the enforcement provisions of Part A, Article XII of the Sewer Use Regulations. Compliance with this regulation, as well as the other provisions of the Sewer Use Regulations, shall be the joint and several obligation of the owner of the property served and any party in possession of the property using the waste water services of the District. Any monies due or penalties to the District under the provisions of the Sewer Use Regulations shall constitute a lien upon the

property served.

- b. The District has the right to reject any waste which may be harmful to or cause obstruction of the publicly owned wastewater collection system or which may interfere with the operation of the publicly owned treatment works.

2.08 Application

This regulation applies to all existing and future uses within the scope of Section 2.01 of this Article II, Part D, above. Those Affected Properties currently conducting operations subject to these regulations shall be provided a grace period of one year from June 11, 2003 in which to come into full compliance with these regulations. The District has determined that the enactment of this regulation is in the best interest of the District and its customers and is necessary for the efficient and proper operation and protection of the District's operations and facilities and this regulation is necessary and in furtherance of the health, benefit, and welfare of the District's customers.