

Best Management Practices (BMPs) for All Non-Residential Dischargers of Fat, Oil, and Grease to the Public Sewer System

From Title 15 of the Rules of the City of New York

§ 19-11 Best Management Practices (BMPs) for All Non-Residential Dischargers of Fat, Oil, and Grease to the Public Sewer System.

(a) Grease interceptors or automatic grease removal devices must be installed by a New York City Licensed Master Plumber in waste lines which may receive fat, oil, and/or grease from all non-residential dischargers, including, but not limited to, those leading from pot sinks, wok stations, soup or stock kettles or similar devices, scraper sinks (pre-rinse sinks), scullery sinks, meat and/or poultry and/or fish preparation sinks, sinks or drains receiving discharges from dairy products, automatic hood wash units, floor drains including but not limited to floor sinks into which kettles are drained, automatic dishwashers which use chemical sanitizers, scraper sinks or other similar plumbing fixtures, vessels, receptacles, and equipment in all restaurants, kitchens (including but not limited to those serving the central eating areas in residential health care facilities, nursing homes, senior centers, rehabilitation facilities, and community centers), hospitals, bars, cafeterias (including but not limited to school cafeterias), clubs, catering halls, butcher shops, slaughterhouses, fish markets, supermarket food processing areas, delicatessens, bakeries, ice cream and yogurt shops, commissaries where food is prepared for off-site food service establishments, grocery stores, coffee shops, tea shops, donut shops, pastry shops, or other non-residential establishments where fat, oil, and/or grease may be introduced into the drainage system.

A grease interceptor or an automatic grease removal device shall not be required for individual dwelling units, any private living quarters, work place pantries used exclusively by employees to prepare meals for themselves where no food or drink is sold, or non-culinary schools which only contain residential type stoves and sinks intended only for teaching basic home cooking skills.

Sizing of grease interceptors and automatic grease removal devices must comply with the criteria specified in this section, including applicable Tables I and/or II.

For grease interceptor sizing, the required minimum flow rate in gallons per minute (gpm) and minimum grease retention capacity in pounds (lb) shall be applicable to hydromechanical grease interceptors. To determine the corresponding minimum size for gravity grease interceptors, such minimum flow rate in gallons per minute shall be multiplied by 3. The resulting number shall be the minimum storage capacity in gallons that shall be required if a gravity grease interceptor is installed.

If a grease interceptor or automatic grease removal device model is not manufactured in the required size then the next higher size for that model shall be the required size.

(b) All prefabricated grease interceptors and automatic grease removal devices shall either have been approved by the New York City Board of Standards & Appeals prior to July 10, 1991, approved by the New York City Department of Buildings Materials and Equipment Acceptance Division prior to July 1, 2008, or shall be designed and tested in accordance with the Plumbing and Drainage Institute standard PDI G101, or the American Society of Mechanical Engineers standards ASME A112.14.3 or ASME A112.14.4 and shall be installed in accordance with the manufacturer's instructions. The design, construction, and installation of all grease interceptors and automatic grease removal devices must not hinder the ability to perform a dye test for the purpose of

ascertaining connections to waste lines, unless installed with a dye testing port for such purposes, upstream of the inlet of such interceptors and devices. Neither shall such design, construction, and installation hinder the ability to perform such other inspection as may be necessary for determining compliance with these regulations. Grease interceptors and automatic grease removal devices that are installed below grade which have lids that are unequal in surface area to that of the body of such interceptors and devices must either have an opening just under where the lid sits that is of a different width from that of all other models made by the same manufacturer, or alternatively must have another tamper-proof distinguishing feature subject to Department approval, so that the model can be readily identified when installed below grade. No grease interceptor or automatic grease removal device shall be installed below grade, if the model is not readily identifiable visually when installed below grade, except where the Department identifies the model visually at the time of installation or subsequent thereto upon excavation of such interceptor or device.

(c) The method for determining the minimum flow rate in gallons per minute (gpm) and the minimum grease retention capacity in pounds (lb) of a grease interceptor or automatic grease removal device is provided in Tables I and II below:

Table I		Table II	
Aggregate volume in cubic inches of all plumbing fixtures, vessels, receptacles, and equipment listed in this table.	Minimum grease interceptor or automatic grease removal device flow rate and grease retention capacity for pot sinks, food prep. sinks, scullery sinks, combination ovens, tilting braisers/tilting skillets, any plumbing fixture receiving discharge from soup and stock kettles, and floor drains which are used for washdown purposes only.*	Aggregate volume in cubic inches of all plumbing fixtures, vessels, receptacles, and equipment listed in this table.	Minimum grease interceptor or automatic grease removal device flow rate and grease retention capacity for: scraper/ pre-rinse sinks, woks, automatic hood wash units, rotisserie machines, and automatic dishwashers.*
Up to 2,464	4 gpm / 8 (lb)	Up to 1,232	4 gpm / 8 (lb)
2,465 to 4,312	7 gpm / 14 (lb)	1,233 to 2,156	7 gpm / 14 (lb)
4,313 to 6,160	10 gpm / 20 (lb)	2,157 to 3,080	10 gpm / 20 (lb)
6,161 to 9,240	15 gpm / 30 (lb)	3,081 to 4,620	15 gpm / 30 (lb)
9,241 to 12,320	20 gpm / 40 (lb)	4,621 to 6,160	20 gpm / 40 (lb)
12,321 to 15,400	25 gpm / 50 (lb)	6,161 to 7,700	25 gpm / 50 (lb)
15,401 to 21,560	35 gpm / 70 (lb)	7,701 to 10,780	35 gpm / 70 (lb)
21,561 to 30,800	50 gpm / 100 (lb)	10,781 to 15,400	50 gpm / 100 (lb)
30,801 to 46,200	75 gpm / 150 (lb)	15,401 to 23,100	75 gpm / 150 (lb)
46,201 to 61,600	100 gpm / 200 (lb)	23,101 to 30,800	100 gpm / 200 (lb)
61,601 to 92,400	150 gpm / 300 (lb)	30,801 to 46,200	150 gpm / 300 (lb)

92,401 to 123,200	200 gpm / 400 (lb)	46,201 to 61,600	200 gpm / 400 (lb)
123,201 to 154,000	250 gpm / 500 (lb)	61,601 to 77,000	250 gpm / 500 (lb)
154,001 to 184,800	300 gpm / 600 (lb)	77,001 to 92,400	300 gpm / 600 (lb)
184,801 to 215,600	350 gpm / 700 (lb)	92,401 to 107,800	350 gpm / 700 (lb)
215,601 to 246,400	400 gpm / 800 (lb)	107,801 to 123,200	400 gpm / 800 (lb)
246,401 to 277,200	450 gpm / 900 (lb)	123,201 to 138,600	450 gpm / 900 (lb)
277,201 to 308,000	500 gpm / 1000 (lb)	138,601 to 154,000	500 gpm / 1,000 (lb)
308,001 to 616,000	1,000 gpm / 2,000 (lb)	154,001 to 308,000	1,000 gpm / 2,000 (lb)
616,001 to 924,000	1,500 gpm / 3,000 (lb)	308,001 to 462,000	1,500 gpm / 3,000 (lb)
924,001 to 1,232,000	2,000 gpm / 4,000 (lb)	462,001 to 616,000	2,000 gpm / 4,000 (lb)
1,232,001 to 1,540,000	2,500 gpm / 5,000 (lb)	616,001 to 770,000	2,500 gpm / 5,000 (lb)

Note: Aggregate volume is the maximum volume (e.g. length times width times height to the overflow if rectangular) in cubic inches of all plumbing fixtures, vessels, receptacles, and equipment that are connected to the grease interceptor or automatic grease removal device.

If a premises contains plumbing fixtures, vessels, receptacles, and/or equipment listed in Table I and plumbing fixtures, vessels, receptacles, and/or equipment listed in Table II, all of which are connected to the same grease interceptor, or automatic grease removal device then the method for determining the minimum flow rate in gallons per minute and the minimum retention capacity, in pounds, for the grease interceptor or automatic grease removal device shall be to separately calculate the aggregate volumes for the plumbing fixtures, vessels, receptacles, and/or equipment in Table II. The aggregate volume for the plumbing fixtures, vessels, receptacles, and/or equipment in Table II shall be doubled and added to the aggregate volume for the plumbing fixtures, vessels, receptacles, and/or equipment in Table I. The sum of the two shall then be used under the aggregate volume column of Table I to obtain the corresponding total minimum flow rate and total minimum grease retention capacity that is required for the grease interceptor or automatic grease removal device.

^{*}Subject to the sizing requirements specified in 15 RCNY § 19-11 (i) through (p).

If the aggregate volumes listed in Tables I and II are exceeded, then a New York State Licensed Professional Engineer or a New York State Registered Architect shall extrapolate the appropriate grease interceptor or automatic grease removal device sizing requirements.

- (d) Grease interceptors and automatic grease removal devices must be equipped with devices to control the rate of water flow so that the water flow does not exceed the rated flow. The flow control device must be vented and terminate not less than 6 inches (152 mm) above the flood rim level or be installed in accordance with the manufacturer's instructions. Flow-control valves and/or fittings that are manually adjustable may not be used to limit flow to a grease interceptor or automatic grease removal device.
- (e) Grease interceptors and automatic grease removal devices must be rated by flow rate in gallons per minute and grease retention capacity in pounds. The grease retention capacity, in pounds, must be at least twice the numerical flow rate in gallons per minute. Both the minimum required grease retention capacity in pounds and the minimum required flow rate in gallons per minute must be satisfied when determining grease interceptor and automatic grease removal device sizing.
- (f) Grease interceptors and automatic grease removal devices shall remove an average of 90 percent or more of the grease or other extractable matter in the wastewater before their rated grease retention capacity is exceeded.
- (g) The temperature of water entering a grease interceptor or automatic grease removal device must not exceed 180°F, except where only waste lines discharging water above 180°F are connected to such interceptor or device. The Department may require a dedicated grease interceptor or automatic grease removal device of sufficient capacity for waste lines that only discharge water above 180°F.
- (h) All grease interceptors and automatic grease removal devices must be installed in locations such that they are readily accessible for routine maintenance and inspection. Establishments must provide access to and open their grease interceptors and automatic grease removal devices for inspection by the Department upon request, and must have the necessary tools readily available.
- (i) Grease interceptors and automatic grease removal devices for scraper sinks must be sized in accordance with Table II, except that the minimum flow rate and grease retention capacity must be 15 gallons per minute and 30 pounds, respectively. When determining the aggregate volume of all plumbing fixtures, vessels, receptacles, and equipment specified in Table II that are connected to a grease interceptor or automatic grease removal device, a minimum of 3,465 cubic inches per scraper sink must be used.
- (j) Discharges from automatic dishwashers which use chemical sanitizers must drain to a grease interceptor or automatic grease removal device. The minimum flow rate of the required grease interceptor or automatic grease removal device as per Table II for a single rack automatic dishwasher must be equivalent to the dishwasher's discharge rate in gallons per minute, as indicated on the manufacturer's specification sheet, or based on the number of gallons of water the device uses per wash cycle, or a minimum of 1,100 cubic inches, whichever is greater. The minimum flow rate of the required grease interceptor or automatic grease removal device as per Table II for a conveyor or multi-rack automatic dishwasher must be equivalent to the dishwasher's discharge rate in gallons per minute, as indicated on the manufacturer's specification sheet, or based on the

number of gallons of water the device uses per wash cycle, or a minimum of 2,200 cubic inches, whichever is greater. The minimum grease retention capacity in pounds must be that which corresponds to such flow rate in Table II.

- (k) Discharges from high-temperature sanitizer cycles of automatic dishwashers must not drain to a grease interceptor or automatic grease removal device, except where only waste lines discharging water above 180°F are connected to such interceptor or device. The Department may require a dedicated grease interceptor or automatic grease removal device of sufficient capacity for waste lines that only discharge water above 180°F.
- (l) Floor drains, including but not limited to floor sinks, trench, and trough drains, which may receive grease must be connected to a grease interceptor or automatic grease removal device. The size of such grease interceptor or automatic grease removal device shall be determined as follows:
- (1) For floor drains up to 3 inches in diameter where grease may be discharged during washdowns, Table I shall be used, and 1,540 cubic inches per floor drain shall be added to the aggregate volume. For floor drains up to 4 inches in diameter, 2,738 cubic inches per floor drain shall be added to the aggregate volume. For floor drains up to 5 inches in diameter, 4,278 cubic inches per floor drain shall be added to the aggregate volume. For floor drains up to 6 inches in diameter, 6,160 cubic inches per floor drain shall be added to the aggregate volume. Trench and trough drains shall be sized in accordance with the above requirements using their corresponding drain diameters except that the actual volume of the trench or trough shall be used if greater than the above minimum volumes.
- (2) Grease interceptors and automatic grease removal devices for floor drains which receive discharges directly from plumbing fixtures, receptacles, vessels, and/or equipment must be sized in accordance with paragraph (1) above except that where the volume of the plumbing fixtures, receptacles, vessels, and/or equipment is greater than that of the volume in cubic inches specified in paragraph (1) above for the diameter of the floor drain, or in the case of trench and trough drains, greater than the actual volume of the trench or trough, the grease interceptors and automatic grease removal devices must be sized in accordance with the Table and corresponding sizing requirements applicable to such plumbing fixtures, vessels, receptacles, and/or equipment.
- (3) Floor drains receiving discharges from a grease interceptor or automatic grease removal device must be surrounded by a water-proof collar a minimum of 1 1/2 inches in height for the purpose of preventing liquids from the floor from entering such drains. If installing such a collar would create a trip hazard, a properly sized grease interceptor or automatic grease removal device must be installed downstream of the drain instead.
- (m) For soup and/or stock kettles, the calculation of aggregate volume to be used in Table I must be made based upon the total volume of all soup and stock kettles connected to the grease interceptor or automatic grease removal device even if the discharges from these vessels are made to a floor drain or similar plumbing fixture.
- (n) (1) Where a wok table, either alone or combined with other types of plumbing fixtures, is connected to a grease interceptor or automatic grease removal device, each wok shall be deemed to contribute 1,617 cubic inches to the aggregate volume of Table II. For the purpose of determining such volume, the number of woks shall be deemed to be equivalent to the number of gas burners at the corresponding wok table, regardless of the actual number of woks that are used.

- (2) A minimum of 3,234 cubic inches shall be added to the aggregate volume of Table I when calculating the grease interceptor or automatic grease removal device for 1/2 size or smaller combination ovens with automatic or manual cleaning systems, or calculated based on the actual amount of water usage during the wash cycle, or the discharge rate in gallons per minute, whichever is greater. A minimum of 4,851 cubic inches shall be added to the aggregate volume of Table I when calculating the grease interceptor or automatic grease removal device for 2/3 size combination ovens with automatic or manual cleaning systems, or calculated based on the actual amount of water usage during the wash cycle, or the discharge rate in gallons per minute, whichever is greater. A minimum of 6,468 cubic inches shall be added to the aggregate volume of Table I when calculating the grease interceptor or automatic grease removal device for full size combination ovens with automatic or manual cleaning systems, or calculated based on the actual amount of water usage during the wash cycle, or the discharge rate in gallons per minute, whichever is greater.
- (o) Discharges from the cleaning of kitchen hoods which may extract grease from cooking operations must be made to receptacles or floor drains that are connected to a grease interceptor or automatic grease removal device. The minimum flow rate of the required grease interceptor or automatic grease removal device as per Table II for an automatic hood wash unit shall be equivalent to such unit's discharge rate in gallons per minute, as indicated on the manufacturer's specification sheet or based on the number of gallons of water the device uses per wash cycle, or based on the length of the hood system (0.7 gallons per minute per foot), whichever is greater. The minimum flow rate of the required grease interceptor or automatic grease removal device as per Table I for an electrostatic precipitator shall be equivalent to the precipitator's discharge rate in gallons per minute, as indicated on the manufacturer's specification sheet, or based on the number of gallons of water the precipitator uses per wash cycle, whichever is greater. The minimum grease retention capacity in pounds shall be that which corresponds to such flow rate in Table II.
- (p) Grease interceptors or automatic grease removal devices smaller than those described in Tables I and II may be used, but only if connected in parallel to another grease interceptor or automatic grease removal device, and the aggregate flow rate and grease retention capacity of such interceptors or devices must either equal or exceed the minimum flow-through rate and grease retention capacity required by Tables I and/or II. For parallel connections, vented flow control fixtures must be installed on each grease interceptor or automatic grease removal device. Grease interceptors or automatic grease removal devices connected in parallel must be of equal flow rate in gallons per minute and grease retention capacity in pounds. The flow of wastewater must be evenly distributed into each grease interceptor or automatic grease removal device.
- (q) Grease interceptors and automatic grease removal devices must be correctly installed, maintained in good working order, and operated properly to ensure that the requirements of this section and other applicable sections of the regulations are met. This must include routine cleaning and fat, oil, grease, and solids removal as needed to ensure proper operation and to prevent the rated grease retention capacity from being exceeded. However, the minimum cleaning frequency shall be such that the accumulated fat, oil, grease, and solids do not exceed 25% of the total liquid depth that the grease interceptor or automatic grease removal device was designed to hold.
- (r) New York State Licensed Professional Engineers and New York State Registered Architects may petition the Commissioner in writing for acceptance of an alternative pretreatment device, technology, equipment or procedures varying from, but equivalent to, those listed in this section. Such a petition must contain detailed documentation and calculations substantiating their

equivalency. In no event shall any alternative pretreatment device, technology, equipment or procedures be less stringent than the requirements of this section.

- (s) Notwithstanding any other provision of this section, (1) existing grease interceptors and automatic grease removal devices must conform to the specific requirements of this section, as amended, no later than one year after the effective date of the amendments to this section, except where engineering plans showing such interceptors and devices and the specific plumbing fixtures, vessels, receptacles, or equipment they are connected to had been approved by the Department and such interceptors and devices and plumbing fixtures, vessels, receptacles, or equipment are in accordance with the approved plans, conformity with the specific requirements of this section, as amended, must be attained upon replacement of such interceptors and devices; no such plans shall be deemed to waive, nor be held to limit the power of the Commissioner to enforce any requirements of this section where such plans fail to accurately and completely represent such installations, or their actual use, or fail to show a connection to a properly sized grease interceptor or automatic grease removal device and (2) grease interceptors and automatic grease removal devices installed after the effective date of the amendments to this section pursuant to an application filed before such effective date must conform to the specific requirements of this section, as amended, no later than 90 days after such effective date.
- (t) Notwithstanding anything contained in 15 RCNY § 19-11, the Commissioner, in his or her discretion, may require any grease interceptor or automatic grease removal device to be installed at any time and to have a flow rate and a retention capacity equal to those listed in Tables I and/or II.
- (u) The use of emulsifiers, enzymes, chemicals, microbial agents, or other additives in grease interceptors or automatic grease removal devices is prohibited.
- (v) (1) Yellow grease (waste cooking oil) must only be disposed of through collection by a carter having a trade waste removal license from the City of New York Business Integrity Commission, and that provides written proof of collection to the establishment that generated the yellow grease, each time a pickup is made from the establishment. The written proof must be maintained by such establishment on site for at least one year from the date of disposal, and must be made available to the Department upon request.
- (2) It is the responsibility of all yellow grease generating establishments to secure their yellow grease from theft so as to ensure that the written proof required in Subdivision (v)(1) above is obtained for every batch of yellow grease disposed of.

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