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## **Purpose of Fats, Oils and Grease (FOG) Program:**

This guideline has been developed to provide uniform direction to restaurants and other food service establishments in areas subject to the Industrial Waste Control program of the County of Los Angeles, Public Works (PW), Environmental Programs Division (EPD) and accomplish the following:



- To facilitate compliance with Los Angeles County Code (LACC), Title 20, Division 2, other laws, regulations, and ordinances
- To protect the public sewer discharge, and
- To obtain optimum operating efficiency of pretreatment systems while minimizing maintenance

## **DEFINITIONS:**

The selected definitions below are reproduced for convenience. Those indicated by an asterisk (\*) are in addition to those found in LACC, Title 20, Chapter 20.20

**Domestic Sewage** - “Domestic Sewage” means waterborne wastes derived from ordinary living processes, and of such character as to permit satisfactory disposal, without special treatment, into the public sewer by means of a private sewage disposal system.  
[LACC §20.20.100]

**Drainage Fixture Unit\***- “Drainage fixture Unit” is a unit of measure, that expresses the hydraulic load imposed by that fixture on the sanitary plumbing installation”. A Fixture Unit is not a flow rate unit but a design factor. A Fixture Unit is used in plumbing design for both water supply and wastewater [[https://en.wikipedia.org/wiki/Fixture\\_unit](https://en.wikipedia.org/wiki/Fixture_unit)].

**Grease Interceptor\*** - “Grease Interceptor” is a large (750 gallon in capacity or greater) two or more compartments precast concrete plumbing device designed to intercept and prevent fats, oil, and grease from entering the sanitary sewer system.

**Grease Trap\*** - “Grease Trap” means small, multi-baffle, single compartment, 25 -75 gallons total volume plumbing device designed for the removal of fats, oil, and grease, from the sanitary sewer system. Minimum required capacity for a grease trap is 25 gallons per minute flow rate.

**Grease Recovery System\***- Grease Recovery System is a grease recovery device/system that is a small single compartment unit with internal mechanisms that separate fats, oils, and grease from drain water flow and automatically removes them from the unit.

**Food Service Establishment\***- “Food service establishment” means a facility engaged in preparing food for consumption by the public such as a restaurant, bakery, commercial kitchen, caterer, warming kitchens, hotel, school, religious institution, hospital, prison, correctional facility, or care institution.

**Fats, Oils, and Greases\***- “Fats, Oils, and Greases (FOG)” means nonpetroleum organic polar compounds derived from animal and/or plant sources that contain multiple carbon chain triglyceride molecules. These substances are detectable and measurable using analytical procedure established in the United States Code of Federal Regulations 40 CFR 136, as may be amended from time to time. All are sometimes referred to herein as “grease” or “greases”.

**Industrial Waste** – “Industrial Waste” means any and all waste substances, liquid or solid, except domestic sewage, and includes among other things radioactive wastes and explosives, noxious or toxic gas when present in the sewer system. [LACC §20.20.150]

**Industrial Waste Treatment Facility** – “Industrial Waste Treatment Facility” means any works or device for the treatment, storage, or control of industrial waste within a site prior to disposal. [LACC §20.20.170]

**Interceptor** – “Interceptor” means a device designed and installed to separate and retain deleterious, hazardous, or undesirable matter from waste. [LACC §20.20.190]

**Pretreatment** – “Pretreatment” or “treatment” means the reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutants properties in wastewater to a less harmful state prior to or in lieu of discharging or otherwise introducing such pollutants into POTW or other disposal facility. The reduction or alteration can be obtained by physical, chemical, or biological processes or process changes by use of an industrial waste treatment facility or other means, except as prohibited by 40 CFR Section 403.6(d). [LACC §20.20.264]

### **ESTABLISHMENTS REQUIRING GREASE INTERCEPTORS:**

A pretreatment system/device such as a grease interceptor is required for any new and existing food service establishment or other establishments where FOG from food preparation is introduced/discharged into the sewer system, in quantities that may cause line or public sewer stoppage, interfere with sewage treatment or private sewage disposal.

The following criteria are used by EPD to determine whether a pretreatment system will be required:

- 1) All food establishments in the City of Lakewood.
- 2) Establishment is in an area determined by EPD to have potential sewer maintenance problems by excessive grease accumulation, due to a high concentration of food service

operations, physical condition of the public sewer system or other factors. Currently identified areas include, but are not limited to, all or portions of the following:

- City of La Verne
- City of Monterey Park
- City of Gardena
- City of West Hollywood
- City of Cerritos
- Hacienda Heights/Rowland Heights
- City of La Puente
- Marina del Rey

- 3) Establishment has a seating capacity of 150 people or more.
- 4) Establishment discharges to sewer whose grade is less than the minimum grades established by local sewer maintenance agency. The following minimum grades established for those areas where PW is the agency responsible for sewer maintenance.

PIPE SIZE	SEWER GRADES	MINIMUM
8"	0.40%	0.0480 in/ft.
10"	0.32%	0.0384 in/ft.
12"	0.24%	0.0288 in/ft.
15"	0.16%	0.0192 in/ft.
18"	0.14%	0.0168 in/ft.
21"	0.12%	0.0144 in/ft.
24"	0.10%	0.0120 in/ft.

- 5) Establishment discharges to a sewer which is less than 8 inches normal diameter.
- 6) Establishment discharges to a dead-end sewer or is located near the end of the sewer line with minimal or no upstream flow.
- 7) Establishment is engaged in food services where a significant portion of product produced is dispensed through delivery, drive-thru, or take out and/or foods served have initial fat content or are prepared using grills, fryers, stir-fry type (wok) ranges, barbecues, or similar devices where grease must be collected for disposal or utensils must be frequently cleaned.

**EXEMPT ESTABLISHMENTS:**

- ❖ Food service establishments of all types may be exempted from grease interceptor installation requirements where the point of connection is to a sewer operated and

maintained by a public agency other than PW or an Industrial Waste Control Program contract city and the jurisdictional agency does not require grease interceptor installation. Voluntary installations in such situations where the establishment is physically located within Public Work's jurisdiction shall be subject to this guideline.

- ❖ Businesses whose operations are limited to the sale of beverages only and/or businesses that do not utilize any cooking equipment(s) may be exempt from installing a grease pretreatment device. Depending on the local jurisdiction ordinances or at the discretion of the County Engineer, such businesses may still be subject to proposing/installing grease pretreatment devices. Even if a food service establishment may be exempt, the site will still be reviewed according to the LACC, Title 20, Division 2 by a County Engineer for consideration and/or approval. If the site is not located in Unincorporated Los Angeles County or one of the Industrial Waste Control Program contracted Cities, then the site will not be reviewed by EPD and must check with the local jurisdiction on the process for whether a grease pretreatment device will need to be installed.

**GREASE INTERCEPTOR INSTALLATION REQUIREMENTS:**

The proposed grease interceptor(s) shall satisfy the following criteria:

1. Grease interceptor shall be installed in the waste line downstream and as close as practical to fixtures or equipment where grease may be introduced into the drainage or sewer system.
2. Grease interceptor capacity shall be determined by following the California Plumbing Code 2016 Table 1014.3.6\*, which are referenced below. Minimum sizing shall not be less than 750 gallons, and no more than 1500 gallons (upper limit for restaurants only), unless otherwise authorized by EPD.

DRAINAGE FIXTURE UNITS (DFUs)	INTERCEPTOR VOLUME (gallons)
8	500
21	750
35	1000
90	1250
172	1500

For SI units: 1 gallon = 3.785 L

\*See California Plumbing Code, Section 1014.3.6 - Sizing Criteria, for details

3. Proposed grease interceptors should carry at least one certification from recognized organizations such as IAPMO, IPC, UPC, or PDI. The installation of a sampling box with a restaurant grease interceptor will not be a standard requirement, unless specifically required and/or approved by the Environmental Programs Division (EPD).
4. There shall be an adequate number of manholes to provide access for cleaning all areas of a grease interceptor, a minimum of **two (2)** per interceptor. Manhole covers

shall be gas tight in construction having a minimum opening dimension of twenty-four (24) inches.

5. In areas where vehicle traffic may exist, the grease interceptor shall be traffic rated by the manufacturer to the loads designated for the installation location and cover.
6. Toilets, urinals, showers, drinking fountains, and other domestic sanitary waste fixtures shall **not** discharge through the grease interceptor.
7. Any waste generated from fixtures such as ice bins and ice machines, as well as condensate from walk-in coolers, refrigeration, and air conditioning units, need to be discharged to sewer line and not to the grease interceptor line to prevent the premature solidification of greases in sewer lines.
8. Discharges from hot fixtures such as dish washers as well as a temperature more than 140°F need to be discharged to sewer line and not to the grease interceptor line.
9. Unless otherwise approved by EPD, the following facilities/fixtures shall discharge through the grease interceptor: Mop sinks, pot sinks, stir-fry type (wok) range drains, hand sinks and floor sinks in food preparation, cooking, can, cart, and mat wash areas and other grease accumulating fixtures.
10. All wastes shall enter the first compartment of the grease interceptor through the inlet pipe only.
11. Grease interceptor shall be maintained in efficient operating condition by periodic removal of accumulated grease. No such collected grease from the oil bins (for instance) shall be deposited on-site or introduced into any drainage piping, street, gutter, storm drain or public or private sewer.
12. Approval of the location of the indoor pretreatment device by the department of Public Health and Safety is required.
13. Each grease interceptor shall be installed and connected so that it is easily accessible for inspection, cleaning, and removal of accumulated grease, at all times.
14. A grease interceptor shall serve only the establishment where facility was required. Special consideration may be given to multiple businesses establishment connections to a common interceptor where individual installation is not practical and:
  - a. all tributary establishments are under lease to a common property owner,
  - b. the property owner agrees to be responsible for the interceptor maintenance,
  - c. the interceptor is sized for the combined flow for all establishments served by the facility, and
  - d. the property owner obtains and maintains in full effect an Industrial Waste Disposal Permit for operation of the facility.

15. The introduction of bacteria or similar product(s) into the grease interceptor or sanitary sewer system for the purpose of maintenance shall be subject to prior approval by EPD.
16. Unless specifically required and/or permitted by EPD, no food waste disposal unit (garbage grinder) shall be connected to or discharged into a grease interceptor.

### **ALTERNATIVE PRETREATMENT DEVICES:**

Alternative Grease Recovery Systems in lieu of a restaurant grease interceptor may be authorized by EPD for establishments subject to the above criteria where one of the following can be demonstrated:

- I. Inadequate slope exists or cannot be provided for gravity flow between:
  - a. the otherwise desirable grease interceptor location and the public sewer or collection lines, and/or
  - b. plumbing fixtures tributary to grease-laden operations and an acceptable grease interceptor location.
- II. Inadequate room exists at the site for installation and/or maintenance of a grease interceptor.

### **Industrial Waste Disposal Permit Required:**

All pretreatment facilities whether required by EPD or installed voluntarily shall be maintained and operated under a valid Industrial Waste Disposal Permit (IWDP) for the operating life of the facility. The IWDP may be subject to conditions and limitations including a scheduled maintenance program for substandard or excessively loaded facilities.

Prior to EPD approving a proposed alternative pretreatment device, the applicant must submit the following for consideration:

- I. Written justification
- II. Sizing calculations as outlined under the Formula for Sizing Restaurant Grease Interceptors

**RECOMMENDED PRETREATMENT FACILITIES FOR RESTAURANT AND FOOD  
PROCESSING OPERATIONS**

❖ **Los Angeles County Standard Grease Interceptor**

- The grease interceptor needs to have 750 gallon minimum and 1500 gallon maximum capacity (upper limit applies to restaurants only), unless otherwise authorized by EPD.
  - We are open to the installation of grease interceptors from various manufacturers, such as Jensen, Schier, etc. However, please ensure you confirm and obtain approval from EPD prior to the installation of your chosen grease interceptor.



❖ **Alternative Systems**

EPD has organized a list of Acceptable Pretreatment Facilities for Food Service Establishments and Food Processing Operations which is attached for the applicant's reference. The purpose of this list is to narrow the applicant's search for alternative systems by detailing previously approved devices which meet the County's pretreatment standards. Alternative systems not described on the list may be proposed and will be reviewed according to the LACC, Title 20, Division 2 by a County Engineer for consideration and/or approval.

Item	Manufacturer	Model	Website	Notes
<b>Automatic Grease Traps/Pretreatment Systems</b>				
1-A	Goslyn	GOSLYN GOS-80	<a href="http://www.goslyn.com/">http://www.goslyn.com/</a>	Minimum required: 25 gallons per minute flow rate
2-A	JAY R. SMITH MFG. CO	8165-25	<a href="https://www.jrsmith.com/grease-interceptors">https://www.jrsmith.com/grease-interceptors</a>	Minimum required: 25 gallons per minute flow rate
3-A	MIFAB	MI-G-AD-25	<a href="https://www.mifab.com">https://www.mifab.com</a>	Minimum required: 25 gallons per minute flow rate
4-A	Thermaco	W-250-IS	<a href="https://thermaco.com">https://thermaco.com</a>	Minimum required: 25 gallons per minute flow rate
<b>Hydromechanical Grease Traps/Pretreatment Systems</b>				
1-H	Canplas	Endura 25 & Endura XT	<a href="https://canplas.com/endura/">https://canplas.com/endura/</a>	Minimum Required: 25 gallons per minute flow rate
2-H	Schier	GB1	<a href="https://schierproducts.com/">https://schierproducts.com/</a>	Minimum Required: 25 gallons per minute flow rate
3-H	Trapzilla	TZ-160	<a href="https://trapzilla.com/">https://trapzilla.com/</a>	Minimum Required: 25 gallons per minute flow rate
4-H	Zurn	GT2700	<a href="https://www.zurn.com/">https://www.zurn.com/</a>	Minimum Required: 25 gallons per minute flow rate