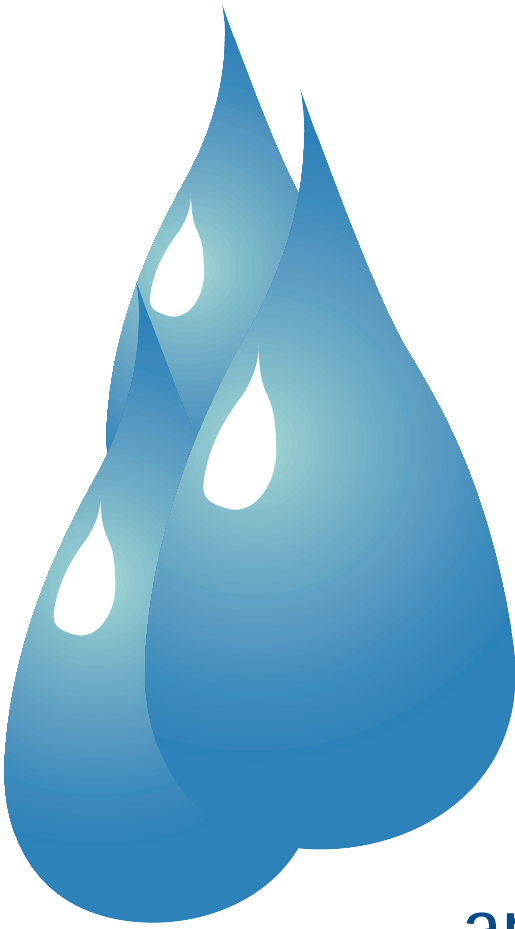


# Food Service Facilities



## Selecting and installing a grease removal device



Regional Water Quality  
Control Plant

Operated by the City of Palo Alto for the East Palo Alto  
Sanitary District, Los Altos, Los Altos Hills, Mountain View,  
Palo Alto, and Stanford

# Do you need a grease removal device?

**G**rease and oily wastewater from restaurants, delicatessens, and other food service facilities clog sewer lines or storm drains when disposed of improperly. Installation of a grease removal device by each facility that generates oil, fats, or grease is required by ordinance in the communities served by the Regional Water Quality Control Plant (RWQCP).

- ▲ You must install a grease removal device if you are building or remodeling a food service facility.
- ▲ You must install a grease removal device if your facility has been cited for a grease discharge violation.
- ▲ All food service facilities must install grease removal devices before January 1, 1997.

Grease removal devices are important both to minimize the amount of grease in local sewer lines, and also to provide appropriate disposal for the kinds of restaurant cleaning wastes that commonly reached a street or storm drain in the past. Fry hoods, floor mats, and other greasy equipment should be cleaned in an area where cleaning water will be captured in a grease removal device.

RWQCP staff have prepared this brochure to help you understand the requirement and select the size and type of device that will be most efficient and cost-effective for your business. If you have questions after reading through this material, call 329-2598.

## Other regulatory requirements

In order to install and operate a grease removal device, you will need a plumbing permit from your city. For more information about permit applications and requirements, see page 8.

Santa Clara County facilities may also need approval from the County Department of Environmental Health in order to install a grease removal device. For more information about their requirements, call (408) 299-6060.

## Terms used in this brochure

**Food service facility** Non-residential establishment using or producing oil, fat, or grease

**Grease** Fats, oils, waxes, or other similar substances of vegetable or animal origin, including butter, lard, margarine, vegetable fats and oils, and fats in meats, cereals, seeds, nuts, and certain fruits

**Grease removal device** An interceptor, trap, or other mechanical device designed, constructed, and intended to remove, hold, or otherwise prevent the passage of grease to a publicly owned sanitary sewer system

**Grease interceptor** A concrete chamber where greasy wastewater from the kitchen is retained so that grease can float to the top and the clearer water beneath can flow out to the sanitary sewer. Capacity may be determined using the Uniform Plumbing Code, Appendix H, and/or Section 1012 (see page 4). The minimum size is 750 gallons.

**Grease trap** A device, generally smaller and less expensive than a grease interceptor, designed to retain grease from one to four plumbing fixtures. *Garbage grinders or dishwashers must not discharge to a grease trap.*

**Plumbing fixture** An approved receptacle, device, or appliance, directly or indirectly connected to a drainage system such as the sanitary sewer, that supplies or receives water or liquid-borne wastes

# Guidelines for selecting and installing the right grease removal device for your business

Minimize the amount of grease your facility sends to a grease removal device

*Reduce cleaning frequency, hauling costs, and blockages by following these steps:*

- ▲ Reduce the volume of solids that enter a grease interceptor from garbage grinders.
- ▲ Scrape off greasy trays and pans into waste grease containers before putting them in the sink or dishwasher.
- ▲ Scrape grills and cooking surfaces into waste grease containers.
- ▲ Place baskets in drains to catch solids.
- ▲ Reduce grease in mop water by minimizing spills of oil and grease. If possible, collect spilled grease and add to a waste grease receptacle.

# Select and size a grease removal device

A **grease interceptor** is required by local ordinance for full-service restaurants. Smaller-capacity grease traps provide inadequate retention time for efficient grease recovery. (See page 7 for exceptions noting when grease traps are acceptable.) To calculate the size grease interceptor you need, refer to the following formula in Appendix H of the Uniform Plumbing Code.

$$\text{No. of meals per peak hour} \times \text{Waste flow rate}^1 \times \text{Retention time}^2 \times \text{Storage factor}^3 = \text{Liquid capacity of interceptor}$$

<sup>1</sup>To calculate the **waste flow rate**, add all that apply:

With dishwashing machine	6 gallons
Without dishwashing machine	5 gallons
Single-service kitchen	2 gallons
Food waste disposer	1 gallon

<sup>2</sup>**Retention times:**

Commercial kitchen waste dishwasher	2.5 hours
Single service kitchen Single serving	1.5 hours

<sup>3</sup>**Storage factors:**

Fully equipped commercial kitchen:	
8-hour operation	1
16-hour operation	2
24-hour operation	3
Single-service kitchen	1.5

A grease interceptor must be installed by a licensed plumbing contractor. A partial list of local vendors of these devices is available from the RWQCP, 329-2598.

# Installation

A licensed plumbing contractor can handle all aspects of installation including equipment procurement, plumbing, and in-ground installations that include excavations and concrete/asphalt cutting and repair.

The cost of installation will vary depending on your site. Cost factors include the size of the device, space, grade, proximity to a sewer line, and above-ground or in-ground installation. For competitive pricing, get more than one quote.

# Maintenance

Regular inspection and maintenance is essential to the proper operation of a grease removal device. Local ordinance requires a *minimum* cleaning frequency of once in six months. However, that frequency will increase depending on (1) the capacity of the device, (2) the amount of grease in the wastewater, and (3) the degree to which the facility has contributed to system blockages in the past. Regular cleaning at the appropriate interval is necessary to maintain the rated efficiency of the device. *Equipment that is not regularly maintained puts you at risk of violating the sewer use ordinance—and you may not know you have a problem until an overflow and violation have occurred.*

When you clean your interceptor, contract with a licensed grease hauler to remove it from your premises for appropriate disposal. Waste haulers are allowed to take grease from RWQCP service area cities to the RWQCP for incineration.

# Choosing a grease hauler

When selecting a grease hauler, be aware that services and prices can vary. Minimum services should include:

- ▲ Complete pumping and cleaning of the interceptor and sample box, rather than just skimming the grease layer
- ▲ Deodorizing and thorough cleaning of affected areas, as necessary
- ▲ Disposal/reclamation at an approved location

You and your hauler should agree on an adequate cleaning frequency to avoid blockage of the line.

## Recyclable grease storage

Waste grease from a kitchen is recyclable for use in making soap, animal feed, etc. Grease from a grease trap or interceptor may not be reused in this way. For recyclable grease, the RWQCP recommends that all facilities have waste grease containers, with tight-fitting lids, that are either secondarily contained or kept in a bermed area to protect floor drains and storm drain inlets from spills.

## Keeping up-to-date records

Careful record keeping is one of the best ways to ensure that your grease removal device is being cleaned and maintained on a regular basis. The form on the back of this booklet is provided by the RWQCP to facilities that have been found to be in violation of the ordinance. For additional copies of this form, call 329-2598.

# Other types of devices

A **grease trap** may be approved in lieu of an interceptor for full service restaurants only in very limited circumstances when space is not available. Grease traps will also be approved for facilities producing small quantities of oil, grease, or fat such as delicatessens and small bakeries. Refer to Section 1011 of the Uniform Plumbing Code for requirements related to grease traps such as installation of flow-control devices, flow rates, and other structural requirements. Flow restrictors are beneficial because they increase retention time and efficiency of the grease trap.

Public health concerns may arise when a grease trap is installed on or above the floor. In Santa Clara County, if your situation cannot accommodate below-grade installation, call the County Department of Environmental Health for guidance, (408) 299-6060.

**Automatic grease skimming devices** collect small volumes of water and remove grease into a side container at preset times each day. Special approval from the local permit authority is required to install one of these devices in lieu of a grease interceptor.

Manufacturers of **bacterial additives** claim that their products “break down” grease and enhance the performance of grease traps and interceptors. Such additives cannot be substituted for a grease removal device and regular inspection and maintenance. If you decide to use an additive, make sure the product you select is not an *emulsifier*, which simply keeps grease in suspension and allows it to flow to the sewer system.

# Obtaining necessary permits

## General information

- ▲ Building departments prefer in-ground installations that drain by gravity to the sanitary sewer. Avoid pumps and other mechanical devices in your connection to the sewer, if possible.
- ▲ Size your interceptor in accordance with the Uniform Plumbing Code Appendix H, as described on page 4.
- ▲ For information and approval of grease removal device installation, call the number listed below, or call the Regional Water Quality Control Plant, 329-2598. Conform to Sections 1011 and 1012 of the Uniform Plumbing Code.

City of East Palo Alto  
Building Department                      853-3189

City of Los Altos  
Building Department                      948-0226

Town of Los Altos Hills  
Building Department                      941-7222

City of Mountain View  
Building Department                      903-6313

In Palo Alto,  
call the RWQCP                              329-2598

# Equipment Vendors: Grease Interceptors, Traps, and Other Devices

Elmco Sales  
1195 Evans Ave.  
San Francisco, CA 94124  
(415) 824-4343  
*Traps and devices; distributor  
for J. F. Smith*

Glendon Company  
P.O. Box 2883  
South San Francisco, CA 94080  
(415) 952-6565  
*Traps and devices; distributor  
for Zurn*

Jensen Precast Concrete  
Products  
478 Roseville Road  
Roseville, CA 95678  
(800) 843-9569  
*Interceptors*

Little Pumper  
5667 Snell Ave., #335  
San Jose, CA 95123  
(800) 585-7867  
*Interceptors, traps, and devices*

M. C. Nottingham Company  
13577 Blackie Road  
P.O. Box 728  
Castroville, CA 95012  
(408) 633-3161  
*Interceptors*

P.E. O'Hair  
2901 Spring Street  
Redwood City, CA 94063  
(415) 306-1350  
*Interceptors, traps, and devices;  
distributor for J. R. Smith, Zurn*

Pro-cast Products, Inc.  
27417 East Third  
P.O. Box 602  
Highland, CA 92346  
(909) 793-7602  
*Grease interceptors*

Roto-Rooter  
1330 L'Avenida  
Mountain View, CA 94043  
(415) 968-5933  
*Grease interceptors, traps  
Installation, pumping, and  
maintenance*

Sweet Septic Systems, Inc.  
5701 Mother Lode Drive  
Placerville, CA 95667  
(916) 622-8768  
*Distributor for Big Dipper*

*List compiled by the RWQCP,  
June 1996. Inclusion is not  
an endorsement of vendors  
or products. Call 329-2598  
for additions or changes.*

# 1000 Gallon Grease Interceptor

