

# FATS OILS AND GREASE (FOG) CONTROL PROGRAM GUIDEBOOK



**CITY OF SANTA ANA**

Prepared by



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# Section 1.0 FOG Control Program Overview

## What is FOG?



Fats, oils, and grease.

## How is it produced?



Created from cooking oils, meat fats, batters, butter, margarine, lard, and any additional food preparation sources.

## How does it get into sewer?



FOG is typically discharged from the sinks and drains of food service establishments (FSEs).

## Why is FOG an issue?

The FOG discharged accumulates in sewer lines causing blockages.

- FOG blockages, located in either the property owner's private sewer lateral or the City's public sanitary sewer system, can cause back-ups into kitchens or basements and can lead to sanitary sewer overflows (SSOs).
- SSOs can result in untreated sewage flow onto streets and into storm drains, creeks, and other surface waters.
- SSOs can cause serious health risks to the public, are very expensive to clean up, can result in costly fines, and can even cause businesses to have to shut down.



*FOG Blockage in Pipe*

The City is required by the State Water Resources Control Board (SWRCB) General Waste Discharge Requirements (WDR), Order No. 2006-0003-DWQ to implement a FOG Control Program and to develop this document.

On August 1, 2017, the City of Santa Ana adopted Ordinance Number NS-2921 which establishes the FOG Control Program Rules and Regulations.

# Section 1.1 Who is Required to Comply With the FOG Program

## Who is required to Comply?

Per the City's Ordinance NS 2921 Chapter 39-50, a FSE is defined as "any commercial entity, operating in a permanently constructed structure such as a room, building, or place, or portion thereof, maintained, used, or operated for the purpose of storing, preparing, serving, or manufacturing, packaging, or otherwise handling food for sale to other entities, or for consumption by the public, its members, or employees, and which has any process or device that uses or produces FOG, or grease vapors, steam, fumes, smoke or odors that are required to be removed by a type I or type II hood, as defined in the California Retail Food Code."



The FSEs identified within the City are establishments ranging from sandwich shops to full-service restaurants, including significant kitchens in retirement homes or hospital facilities. Any facility that qualifies as an FSE is required to comply with the rules and regulations established in the City's ordinance and this FOG Control Program Manual.

## FSE Examples



Full service restaurants with multiple pieces of cooking equipment and significant dish washing. Full service restaurants have the potential to generate significant FOG.



Single service restaurants that serve most of the food on paper wrappers and have limited cooking equipment. Single service restaurants generate less FOG, but are still required to comply with the FOG Program.

# Section 2.0 FSE Development Process

All new FSEs planning to open a business in the City of Santa Ana must follow the same process for obtaining the necessary certificates, licenses, and permits prior to opening their business.

## **Development Approval Process**

1. The planned new FSE must begin by visiting the City Planning & Building Agency to confirm the proposed business activity is permitted in the desired locations. If the business activity is permitted, the City Planning & Building Agency will notify the applicant.
  - a. The Planning and Building Agency will direct the applicant to obtain a FOG Control Program review and conditions of approval prior to proceeding with the process.
  - b. Every business, including temporary businesses, operating from commercial premises within the City is required to obtain a Certificate of Occupancy (COO) for their commercial location. The COO is to ensure that the business use of commercial premises complies with all applicable provisions of the City of Santa Ana Municipal Code relating to Zoning and Building & Fire Safety.
2. The FSE will determine if physical alterations to the building or the interior will be required. If alterations will be necessary, the FSE is required to obtain a building permit for the alterations.

The FSE must pass final building inspections if alterations were required prior to issuance of the COO. Additionally, the Building and Safety Department will require Public Works Agency review prior to accepting plans for a new FSE or remodel.

## Opening an FSE

3. The FSE completes the Business License Tax Application and appropriate Tax Fee Schedule based on the type of FSE planned. The following licenses and permits may apply to FSEs:
  - Doing Business As (DBA)
  - Sales Tax Permit
  - Federal Employer Identification Number
  - Preparation or Sale of Food
  - Alcoholic Beverage Control Licenses
  - State Employer Identification Number
  - State Franchise Tax Board
  - Worker's Comp. Ins.
4. Once construction is complete and all required business license, permits, inspections, and fees have been closed-out, the FSE should then contact the City to request a final COO inspection.
5. Once a COO has been issued, the FSE is approved to open for business.





# Section 2.1 FOG Control Review (Public Works Agency)

If at any point during the facility development process it is identified that the new facility is a FSE, the details of the proposed new FSE shall be submitted to Public Works Agency for review. The Public Works Agency has developed an application form that is available on the City's website at <https://www.santa-ana.org/pw/water-and-sewer>. An example of the FOG Program Application Form is also available in Appendix D. Each new FSE should complete and submit the application form and include proposed plans for the facility if available. At this point, Public Works Agency will review the necessary FSE elements to determine if the FSE will be required to install a grease interceptor, or if a waiver can be granted to allow the FSE to operate without a grease interceptor. All potential new or remodeling FSEs are required to undergo Public Works Agency review prior to opening their business.

## 2.1.1 Review Elements

During the review process, there are multiple elements Public Works Agency staff will review to make their determination as to the grease interceptor requirements for the FSE. The focus of the review elements is to determine the potential risk the FSE will have to discharge FOG to the sewer system. The following items are reviewed:

- **Presence of cooking equipment within the FSE:** Higher risk cooking equipment (e.g., deep fryers, grills, griddles, stove, and kettles) can result in high FOG production within an FSE. FSEs planning to install these types of equipment are required to install a gravity grease interceptor. Some cooking equipment typically does not produce high quantities of FOG (e.g., microwaves, toaster ovens, bakery ovens only), and these types of FSEs will typically qualify for a waiver and be conditioned to install a hydromechanical grease interceptor in lieu of a traditional gravity grease interceptor.

- **Physical constraints to install a gravity grease interceptor:** gravity grease interceptors require sufficient excavation space for the interceptors, and require a minimum of 2% slope for the grease waste line to the interceptor and the lateral sewer line from the interceptor to the City's main sewer line. If an FSE can't install a gravity grease interceptor to meet these minimal installation requirements, then the FSE may qualify for a waiver and be conditioned to install a hydromechanical grease interceptor in lieu of a traditional gravity grease interceptor.
- **Remodeling not resulting in increased potential for FOG production:** If the FSE is being evaluated for a remodel and is not a new FSE, then the planned remodel will factor into the decision for the grease interceptor requirements. If the planned remodel will not add or modify cooking equipment the FSE may qualify for a waiver and be conditioned to install a hydromechanical grease interceptor in lieu of a traditional gravity grease interceptor.
- **Remodeling work requiring under-slab plumbing, an increase in seating, and increase in kitchen size, change in food preparation equipment:** Any one of these scenarios could result in an increase in FOG production and are justifications for requiring the FSE to install a gravity grease interceptor.
- **The FSE currently exists and only requires a change in ownership:** Change in ownerships only typically does not result in an increase in FOG discharge and will typically qualify for a waiver from requirements to install a grease interceptor.

## Section 2.2 Final Determination

Based on the review elements, the Public Works Agency staff will make a final determination for the grease interceptor requirements. For any FSE required to install a grease interceptor, the City's general requirement is for the FSE to install a Gravity Grease Interceptor (GGI). However, a GGI does not always work for all FSEs and all FSE locations. Some FSEs who have the potential to discharge small quantities of FOG, have very small kitchens, or have space or slope limitations, are granted Conditional Waivers from the requirement to install a GGI and are allowed to install an appropriately sized HGI or implement some other mitigation measures. Appendix A provides a process flow diagram for the decision making process to determine what type of FSE should be required to install what type of grease interceptor.



FSEs who are granted Conditional Waivers will be required to follow specified waiver conditions. Failure to follow the waiver conditions will result in the revocation of the waiver and the FSE will be required to install a GGI. Typical waiver conditions include: An HGI is provided for the grease waste sinks and drains; The HGI is installed pursuant to all manufacturer requirements including flow control devices and proper space for maintenance access; Kitchen and/or facility's maintenance staff are trained on the operation and maintenance of the HGI; The HGI is maintained pursuant to all manufacturers recommendations including, but not limited to:

- Under no circumstances will the settled solids and/or floating fats, oils and grease (FOG) contained in the grease removal device exceed 25% of the hydraulic depth of the device;
- The full contents of the unit(s) are removed prior to settled solids and/or floating FOG reaching 25% of the hydraulic depth of the device, or at maximum, on a monthly basis (when in use);

- A log is maintained of all HGI service and maintenance activities;
- Signage is to be posted in clear view of kitchen staff stating/illustrating the required Kitchen Best Management Practices (BMPs) requirements;
- Space is reserved for a future outdoor, gravity interceptor installation in the event that the grease removal devices and Kitchen BMPs prove insufficient;
- Compliance with all other requirements of the City's FOG Control Program Rules and Regulations is maintained; FSEs are subject to routine inspections pursuant to the City's FOG Control Program;

Prior to any tenant or facility modification, addition or alteration of cooking or food preparation equipment, plans will be submitted to the City for FOG Program review and re-evaluation of the grease interceptor requirement for the FSE;

- Prior to any change in menu, change in facility name or change in ownership, plans will be submitted to the City for FOG Program review and re-evaluation the grease interceptor requirement for the FSE.

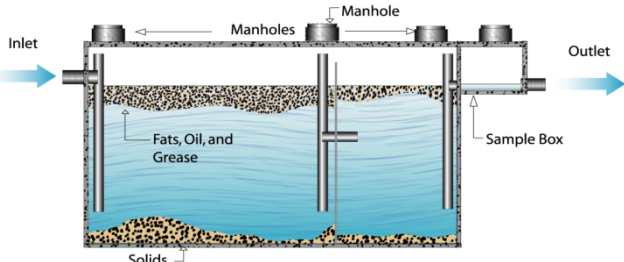
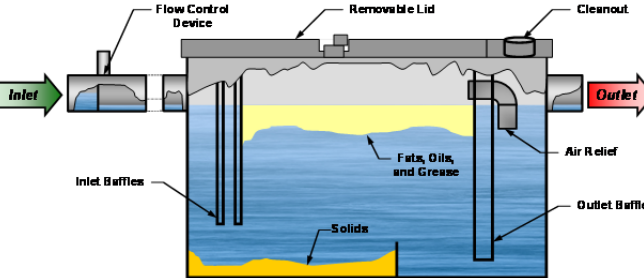
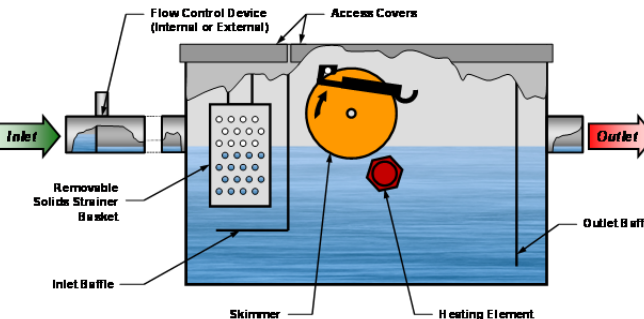
## 2.3 Preparation of Forms

Once the final determination for the grease interceptor requirements has been made, the proper forms must be completed to ensure the requirements are communicated to the appropriate departments. The main document to be completed is the Grease Interceptor Memorandum. The memorandum documents the facility representative, staff member who conducted the review, and location of the FSE. Next, the memorandum states the grease interceptor requirement and the justification for the decision. Below this section, additional comments can be made for specific situations. Finally, the proper recipients should be confirmed prior to sending the memorandum.

# Section 3.0 Grease Interceptors

Grease interceptors are grease collection devices that separate FOG, solids, and water based on the principle of Stoke's Law. Stoke's Law describes the rising or settling of a particle in a fluid (water in this case). Simply put, under non-turbulent conditions in an interceptor, given enough time, particles that are lighter than water (e.g., grease) will rise to the surface and particles that are heavier than water (e.g., solids) will settle to the bottom. The facility's grease waste lines must be separated from the sanitary waste lines (Appendix B, Plumbing Segregation Example, provides an example of the plumbing that is required to be segregated from a grease interceptor).

**Table 3-1, Grease Interceptors**

Type	Sizing	Maintenance
<p>Gravity Grease Interceptor</p> 	<ul style="list-style-type: none"> <li>• Chapter 10 California Plumbing Code</li> <li>• Minimum size is 750 Gallons</li> <li>• If GGI exceeds 1500 gallons, FOG Program Manager will approve based on judgement</li> <li>• Refer to Table 3-1 for required fixture connections</li> </ul>	<ul style="list-style-type: none"> <li>• Minimal quarterly pumping</li> <li>• At a frequency to not exceed 25%</li> <li>• Can apply for variance to pump less frequently if compliance can be demonstrated.</li> </ul>
<p>Hydromechanical Grease Interceptor</p> 	<ul style="list-style-type: none"> <li>• Chapter 10 California Plumbing Code</li> <li>• 25 gpm – 75 gpm</li> <li>• Tested and certified to ASME A112.14.13 or PDI-G101</li> <li>• Flow control device required to match certified flow rate of device.</li> </ul>	<ul style="list-style-type: none"> <li>• Minimal monthly pumping</li> <li>• At a frequency to not exceed 25%</li> <li>• Can apply for variance to pump less frequently if compliance can be demonstrated.</li> </ul>
<p>Grease Removal Device</p> 	<ul style="list-style-type: none"> <li>• Chapter 10 California Plumbing Code</li> <li>• 25 gpm – 75 gpm</li> <li>• Tested and certified to ASME A112.14.13 or PDI-G101</li> <li>• Flow control device required to match certified flow rate of device.</li> </ul>	<ul style="list-style-type: none"> <li>• Inspect all internal parts daily</li> <li>• Minimal monthly pumping</li> <li>• At a frequency to not exceed 25%</li> <li>• Can apply for variance to pump less frequently if compliance can be demonstrated.</li> </ul>

Facilities receiving conditional waivers must separate their grease waste lines from the sanitary waste lines in-case a grease interceptor is required to be installed at a future date.

The different types of grease interceptors are discussed below in Table 3-1 1, Grease Interceptors. Appendix C, Grease Interceptor Standard Plan provides the City’s approved standard plan for a gravity grease interceptor.



## 3.2 Fixture Connections

When determining which fixtures should be connected to a grease interceptor, the best rule of thumb is that any fixture that could receive grease waste from the food service process should be connected to a grease interceptor. Table 3-2, *Grease Interceptor Fixture Connections*, lists the fixtures that should be connected to grease interceptors. This guide is subject to change, and additional sinks and drains may be required for connection if significant FOG accumulation is identified in the private sewer lateral connection or downstream public sewer line.

**Table 3-2, Grease Interceptor Fixture Connections**

Fixture	Typical Location	Typical DFU <sup>1</sup> per CPC	Potential for FOG	Pretreatment Connection
3-Compartment Sink	Dish Wash Area	3-6	High	Required
Pre-rinse Sink	Dish Wash Area	2-4	High	Required
Floor Sinks/Floor Drains/trench drains	Dish Wash Area	2-4	Moderate	Required
Trench Drain	Cooking Area (Kettles)	2-4	High	Required
Floor Sinks	Cooking Area (Woks)	2-3	High	Required
Mop Sink	Anywhere	3-6	Moderate	Required
Commercial Dishwasher	Dish Wash Area	3-6	Moderate or Low	Not Recommended
Prep-Sinks	Food Prep/Cooking Area	2-4	Moderate or Low	Optional
Floor Sinks/Floor Drains	Food Prep/Cooking Area	2-3	Moderate or low	Optional
Hand Sinks	Anywhere	2-3	Low	Not necessary
Drains for Ice Machines	Anywhere	1-2	Low	Not necessary
Toilets and Hand Sinks	Restrooms	N/A	N/A	Never

<sup>1</sup> Drainage Fixture Unit

# Section 4.0 Kitchen Best Management Practices (BMPs)

The City has developed FSE FOG Control educational material for the FSEs. FSEs are provided the General Requirements, a Kitchen BMP Poster, Record Keeping Logs, and other Educational Material. This information, in addition to a digital training video, are also available to FSEs by downloading it from the City's website <https://www.santa-ana.org/pw/water-and-sewer/sewer-services/fats-oil-and-grease-fog-program>. Refer to Appendix E for examples of Kitchen BMP Signage, Record Keeping Logs, and other Educational Material. Currently, educational materials are provided to FSEs during Initial Inspections immediately after the FSE is opened, and as requested during routine FSE FOG inspections.



*Proper Scraping Practices*

Per Section 39-56.3 of Ordinance No. NS-2921, each FSE is required to implement kitchen BMPs at each facility. The implementation of kitchen BMPs not only prevent FOG from entering the City's sewer system, but also prevent blockages and back-up in the FSE's private sewer line, and helps to reduce FOG accumulation in grease interceptors reducing the need for more frequent maintenance activities.



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Examples of the minimal BMPs FSEs are required to implement, include:

- Installation of drain screens
- Segregation and collection of waste cooking oils
- Disposal of food waste into trash or garbage, not into sinks
- Employee training and refresher training every six (6) months
- Frequent cleaning of exhaust filters and appropriate disposal of the waste
- Kitchen signage
- Absorbent material placed under areas susceptible to FOG spills
- Covered conveyance devices to transport FOG
- Emptying of FOG containers before they are full
- Spill kits

### 4.1.1 BMP Non-Compliance

Issues identified as deficient during the BMP inspection process will be documented and the FSE will be issued a Notice of Non-Compliance. The Notice will identify the area of non-compliance and the required action. Issues identified as deficient during the inspection will compromise the effectiveness of the FOG BMP Program, which will increase the FSEs potential to discharge FOG into the sanitary sewer. Therefore, the overall impact of each of the deficient issues will need to be evaluated individually and in relationship to the other reported deficiencies to determine the projected impact and severity of the combined deficient issues. Generally, for a single deficient issue (not considered as a serious non-compliance individually), no further enforcement action will be taken after correction of the deficiency. For multiple deficient issues, an Administrative Warning Notice and/or an Administrative Fine are issued.

For FSE's that repeatedly fail to comply, the enforcement process may become more severe: For example, a repeated non-complaint FSE may no longer receive an Administrative Warning Notice and be directly issued an Administrative Fine; further, the FSE's Conditional Waiver may be revoked.

## 4.1 Record Keeping

At the time of the first FOG inspection conducted by the City, the City provides each FSE with a FOG Program binder. The binder contains log sheets for FSEs to track ongoing employee BMP training activities, grease interceptor maintenance, waste grease oil (“yellow grease”) disposal, and lateral sewer line maintenance. The FOG Program binder also provides a place for the FSEs to store grease interceptor service manifests, copies of City inspection forms, and any other documents associated with the FOG Control Program. It is recommended for FSEs to store the FOG Program binder at a location within the facility where it is easily accessible by all staff.

## 4.2 Inspections

To ensure compliance with the FOG Control Program requirements, the City has developed a few types of FSE Inspections. These inspections and their purpose are as follows:

**Initial Inspections** These inspections are conducted to identify and classify each FSE’s potential to generate FOG and its potential to discharge the FOG to the sanitary sewer system. The inspection identifies the type of food, equipment, and kitchen practices that contribute to FOG discharges and the equipment (e.g., grease interceptors, grease traps) that may reduce the discharge of FOG to the sewer. These initial inspections also provide the opportunity to educate the FSEs on the impact of their grease discharges, what they can do to minimize grease discharges, and how the City’s Regulation could potentially impact them.

**BMP Inspections** These inspections are conducted to evaluate compliance with the facility’s best management practices requirements.

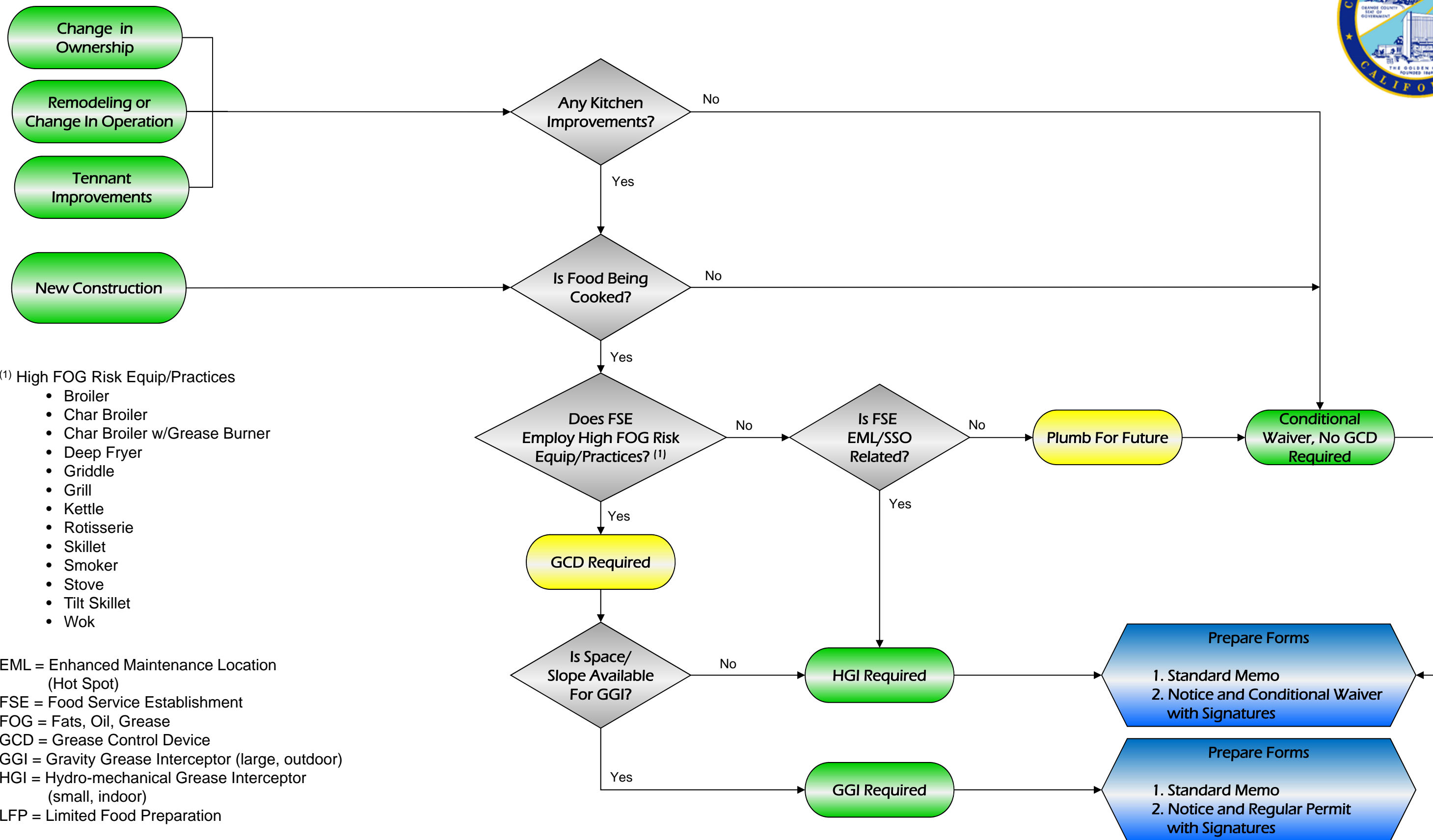
**GRE Inspections** These inspections are conducted to evaluate compliance with the facility's grease removal equipment requirements. The inspector opens the grease interceptor and core samples the grease interceptor to determine compliance with the 25% rule. The inspector then requests to see the facility's maintenance logs. Each facility is provided a Grease Control Log during the Initial Inspection and is expected to record the maintenance activities.

**Compliance Inspections** These inspections are conducted where it is determined by the FOG Control Program Manager that a follow-up inspection is required for a Non-Compliance issue that has been identified in previous BMP, GRE or FOG Source Sewer Line Inspections.

**Enforcement Inspections** These inspections are conducted when elevated enforcement of the Ordinance requirements are required or when the revocation of the FSE's grease interceptor installation Conditional Waiver, Waiver or Variance is required.

The inspection strategy is to focus the City's resources on FSEs in the vicinity and upstream of enhanced maintenance locations and on FSEs that have been identified with a greater potential to generate FOG and discharge FOG to the sanitary sewer system. Generally, BMP and GRE inspections are conducted on an annual basis.

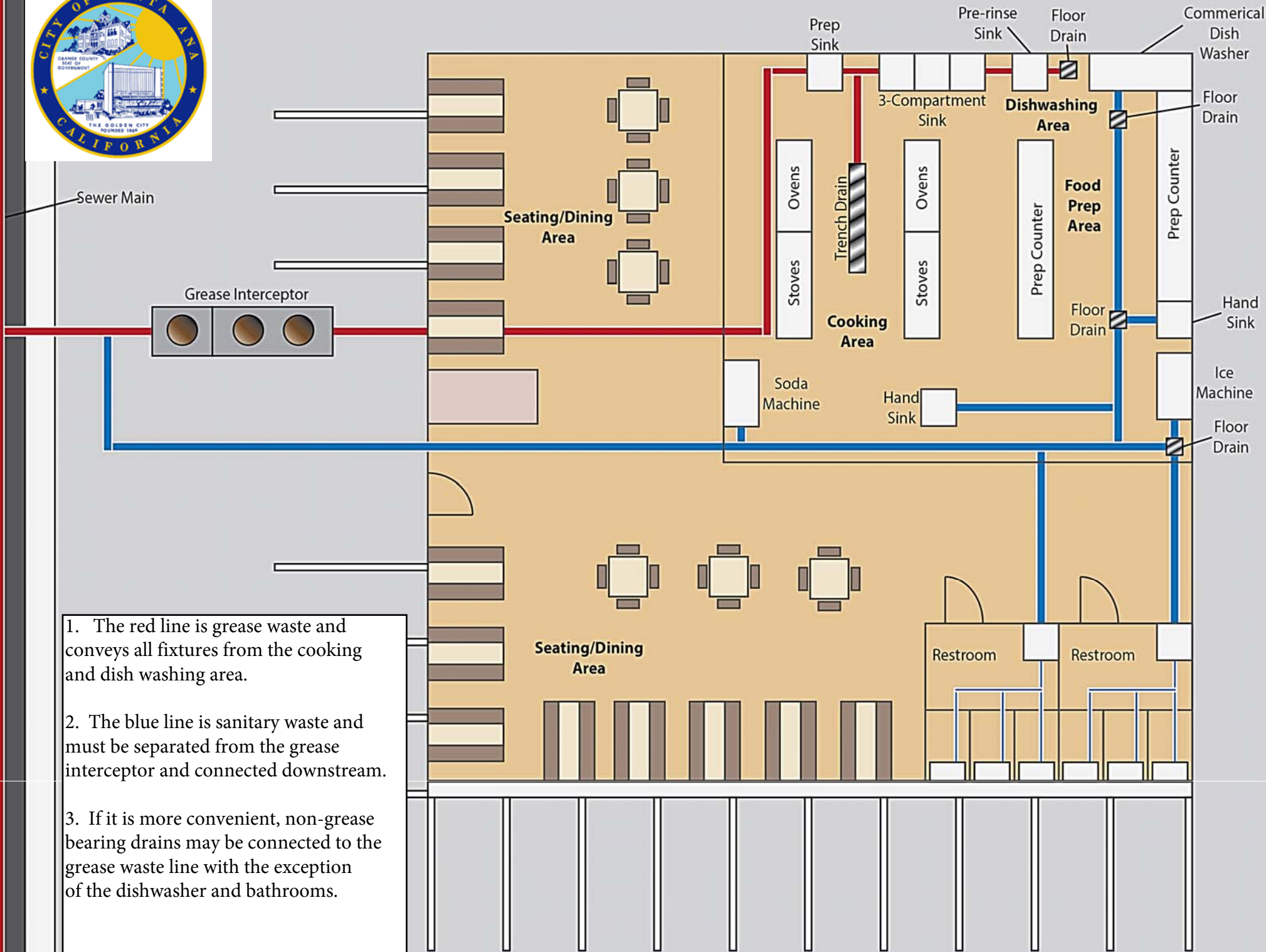
Appendix A  
Grease Interceptor Installation Flow  
Chart



# GCD Requirements Review Guidelines

# Appendix B

## Plumbing Segregation Example

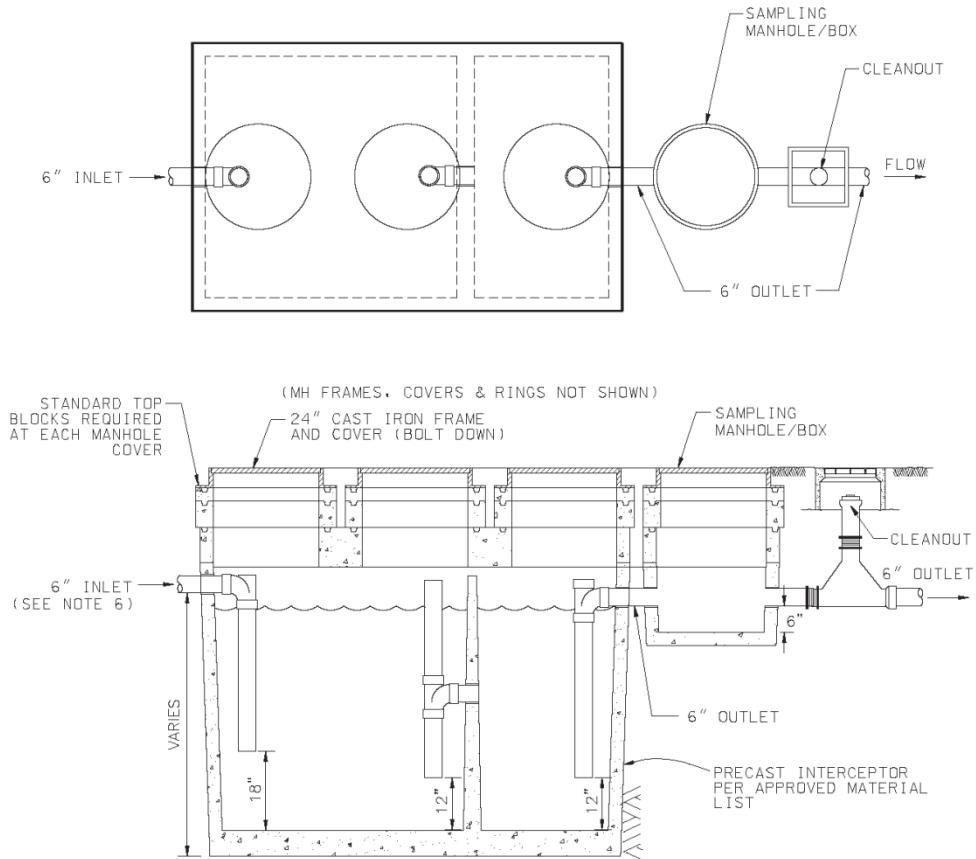


1. The red line is grease waste and conveys all fixtures from the cooking and dish washing area.
2. The blue line is sanitary waste and must be separated from the grease interceptor and connected downstream.
3. If it is more convenient, non-grease bearing drains may be connected to the grease waste line with the exception of the dishwasher and bathrooms.



Appendix C  
Grease Interceptor Standard Plan

## Gravity Grease Interceptor Installation Specifications



### Installation Requirements:

- New construction
- Remodel/change in operation
- Under-slab plumbing
- Causing or contributing to an accelerated line maintenance location
- Interceptors are not intended for the introduction of domestic sewage
- Sample Box Required
- Manhole lid access over each baffle tube required
- Interceptor located in an area subject to traffic must be HS-20 traffic rated
- Alternative materials considered (e.g., HDPE or fiberglass)
- Interceptor must have IAPMO approval
- Use of cast iron pipe for grease interceptor applications is prohibited
- Installed on exterior of building
  - Avoid drive-thru lanes
  - Accessible for inspection and maintenance
  - Minimum 2% gravity flow

**Maintenance Requirements:**

- At a frequency to meet the 25% Rule
- Quarterly pump-out (more frequently/less frequently when appropriate)
- Full pump-out of 100% of the contents required
- Additives that supplement pumping requirements are prohibited

**Required Fixture Connections:**

Fixture	Typical Location	Typical DFU per CPC	Potential for FOG	Pretreatment Connection
3-Compartment Sink	Dish Wash Area	3-6	High	Required
Pre-rinse Sink	Dish Wash Area	2-4	High	Required
Floor Sinks/Floor Drains/trench drains	Dish Wash Area	2-4	Moderate	Required
Trench Drain	Cooking Area (Kettles)	2-4	High	Required
Floor Sinks	Cooking Area (Woks)	2-3	High	Required
Mop Sink	Anywhere	3-6	Moderate	Required
Commercial Dishwasher	Dish Wash Area	3-6	Moderate or Low	Not Recommended
Prep-Sinks	Food Prep/Cooking Area	2-4	Moderate or Low	Optional
Floor Sinks/Floor Drains	Food Prep/Cooking Area	2-3	Moderate or low	Optional
Hand Sinks	Anywhere	2-3	Low	Not necessary
Drains for Ice Machines	Anywhere	1-2	Low	Not necessary
Toilets and Hand Sinks	Restrooms	N/A	N/A	Never

**CPC Table 1014.3.6**

DFUs (Max)	GGI Volume (Gallons)
8	500
21	750
35	1,000
90	1,250
172	1,500
216	2,000
307	2,500
342	3,000
428	4,000

Appendix D  
FOG Program Application Form



**CITY OF SANTA ANA**  
**PUBLIC WORKS AGENCY**

**FOOD SERVICE ESTABLISHMENT FATS, OILS, GREASE APPLICATION FORM**

• **THE FOLLOWING INFORMATION TO BE PROVIDED BY FOOD SERVICE ESTABLISHMENT APPLICANTS:**

1. THE FOOD SERVICE ESTABLISHMENT'S (FSE) **NAME:**
2. THE FOOD SERVICE ESTABLISHMENT'S **ADDRESS** , UNIT #, AND ZIP CODE:
3. **THE OWNER** / APPLICANT/ REPRESENTATIVE'S **NAME:**
4. **THE OWNER** / APPLICANT/ REPRESENTATIVE **PHONE NUMBER:**



**CITY OF SANTA ANA**  
**PUBLIC WORKS AGENCY**

5. PLEASE **CHECK** WHICH OF ONE THE FOLLOWING STATEMENTS APPLY:

THIS IS A NEW FSE.

THIS IS AN EXISTING FSE GOING THROUGH CHANGE OF OWNERSHIP.

THIS IS AN EXISTING FSE GOING THROUGH REMODELING.

THIS IS AN EXISTING FSE GOING THROUGH CHANGE OF USE.

THIS IS AN OUT OF SERVICE FSE, GOING TO BE REUSED.

\*Note: If a tenant improvement or other remodeling/improvements are planned, include a digital copy of the facility plans with this application.

6. **CHECK** THE FOOD SERVICE ESTABLISHMENT TYPE THAT BEST REPRESENTS YOUR FACILITY?

- American-Burger
- Bagel
- Bakery
- Barbecue
- Cafeteria/Buffet
- Chicken
- Chinese
- Coffee Shop
- Cookie
- Deli/Sandwich
- Doughnut
- French
- Greek

- Ice Cream
- Indian
- Italian
- Japanese/Sushi
- Korean
- Meat/Carniceria
- Mexican
- Pizza
- Seafood
- Steakhouse
- Vegetarian
- Vietnamese
- Other \_\_\_\_\_

Appendix E  
FSE Record Keeping Logs and Educational  
Material

# Answers *to questions about...*

## Fats, Oils and Grease (FOG) Public Education Outreach Program

- **Background** The Orange County Sanitation District (OCSD) is the third largest publicly owned wastewater treatment agency west of the Mississippi River. OCSD treats an average of 243 million gallons of sewage per day from 2.5 million people and approximately 1,000 businesses and industries in central, north and west Orange County. OCSD operates two treatment plants, one in Fountain Valley and one in Huntington Beach, California.

In OCSD's 471 square mile service area, sewage from 21 cities, three special districts and some unincorporated areas of Orange County are transported to OCSD through 12,000 miles of sewer pipelines.

- **Problem** When large volumes of fats, oils or grease (FOG) enter sewer pipes, they solidify and accumulate, resulting in narrowing of the pipe's internal opening. Eventually the inside of the pipe can become completely clogged, causing sewage to back up into homes and businesses, or onto the streets and into storm drains that lead to the ocean.

Such spills are unhealthy, harm the environment, and can be expensive to clean up. In the case of food service establishments such as restaurants, they can also lead to fines and business closures.

The problem is simply that people have been putting fats, oils and grease down their drains and garbage disposals. That has to stop. The drain is not a dump.

- **FOG Public Education Outreach Program** The State of California's Regional Water Quality Control Board for the Santa Ana Region has issued an order (No. R8-2002-0014) to local cities and sewer districts to begin controlling the release of fats, oils and grease (FOG) into the sewer system from food service establishments, homes and businesses.

This FOG Public Education Outreach Program is a joint effort undertaken by 22 cities and districts to inform food service establishments, residents and businesses about the problems fats, oils and grease can cause in the sewer system, and to teach better ways to dispose of these materials. The Orange County Sanitation District coordinated the production of the educational materials.

- **Program Participants:**

City of Anaheim	City of Newport Beach
City of Brea	City of Orange
City of Buena Park	County of Orange
City of Cypress	Orange County Sanitation District
El Toro Water District	City of Placentia
City of Fullerton	Rossmoor/Los Alamitos Area Sewer District
Garden Grove Sanitary District	City of Santa Ana
City of Huntington Beach	City of Seal Beach
Irvine Ranch Water District	City of Stanton
City of La Habra	City of Yorba Linda
Midway City Sanitary District	Yorba Linda Water District

*...continued on other side*



Orange County  
Sanitation District

*Mission –  
We protect public health  
and the environment  
by providing effective  
wastewater collection,  
treatment, and recycling.*

10844 Ellis Avenue  
Fountain Valley, CA  
92708-7018

for more information  
call (714) 962-2411  
or visit our web site  
[www.ocsd.com](http://www.ocsd.com)



- **Food Service Establishments** Restaurants and other food service establishments are the primary sources of fats, oils and grease in the sewer system. There are two preferred ways for food service establishments to collect fats, oils and grease:

**Grease Interceptors** – large underground devices connected to the outgoing sewer system. When full, they must be emptied and cleaned by permitted waste pickup and disposal companies. Installation of a grease interceptor ranges from \$8,000 for new construction to \$10,000 to \$15,000 for a retrofit.

**Grease Barrels** – covered barrels for higher quality cooking grease are collected by commercial companies for recycling. This solution alone may not adequately prevent grease from entering the sewer system from sinks unless other kitchen best management practices are followed.

- **General Public** Residential sewer users, not just restaurants, are also sources of FOG problems, especially residents in multifamily buildings. That’s why this FOG education program addresses residents as well as businesses.

Residents can avoid such sewer problems by mixing fats, oils and grease with absorbent materials such as paper towels or kitty litter and putting them where they belong—in the trash.

- **For More Information** Please contact Ingrid Hellebrand, Senior Public Information Specialist with the Orange County Sanitation District, at (714) 593-7115 or ihellebrand@ocsd.com.

- **Resources/Links:**

Orange County Sanitation District  
[www.ocsd.com](http://www.ocsd.com)  
*General FOG information.*

Orange County Grand Jury  
[www.ocgrandjury.org/reports.asp](http://www.ocgrandjury.org/reports.asp)  
*An April 25, 2001 grand jury report shows what the relationship between FOG and sewer spills was thought to be at that time.*

Orange County Health Care Agency,  
 Ocean Water Protection Program  
[www.ocbeachinfo.com/downloads/index.htm](http://www.ocbeachinfo.com/downloads/index.htm)  
*Information on sewer spills and beach closures, and annual reports on ocean and bay water quality.*

Orange County Health Care Agency,  
 Food Protection Program  
[www.ocfoodinfo.com/closures.htm](http://www.ocfoodinfo.com/closures.htm)  
*Information on restaurant closures.*

United States Environmental Protection Agency  
[http://cfpub1.epa.gov/npdes/home.cfm?program\\_id=4](http://cfpub1.epa.gov/npdes/home.cfm?program_id=4)  
*The “home page” for sewer spill information but also data on discharge permits, etc.*

California Regional Water Quality Control Board,  
 Santa Ana Region  
[www.waterboards.ca.gov/santaana/](http://www.waterboards.ca.gov/santaana/)  
*Information on our Region 8’s water quality control board.*





**CITY OF SANTA ANA  
PUBLIC WORKS AGENCY M-85**

P.O. Box 1988  
Santa Ana, California 92702

## **Kitchen Best Management Practices (BMP's)**

### *Sinks and Drains*

#### Drain Screens

- Be installed on all drains
- Have openings between 1/8" and 3/16"
- Be removable for ease of cleaning
- Be frequently cleaned (dispose of the screened solids to the trash)

### *Grease Container Usage*

- Pour all liquid oil and grease from pots, pans, and fryers into a waste grease container
- Prior to washing, scrape solidified fats and grease from pots, pans, fryers, utensils, screens, and mats into a container
- Use recycling barrels or bins with covers for onsite collection of grease and oil
- Empty grill top scrap baskets or boxes into a container

### *Dishwashing*

- Use rubber scrapers, squeegees, or towels to remove food and all visible fats, oils and grease from cook and serving ware prior to dishwashing
- Dry wipe remaining food and fats, oils and grease into trash can prior to dishwashing

### *Spill Prevention and Clean-up*

#### Proactive Spill Prevention and Clean-Up Procedure BMPs

- Develop and post spill procedures
- Develop schedule for training employees about procedures
- Designate a key employee who monitors clean-up

#### Spill Prevention BMPs

- Empty containers before they are full to avoid accidental spills
- Provide proper portable container to transport materials without spilling
- Use a cover to transport grease materials to a recycling barrel

### Spill Clean-up BMPs

- Block off sink and floor drains near the spill
- Clean spills with towels and absorbent material
- Use wet cleanup methods only to remove trace residues

### Absorbent Materials and Towel Usage

- Use disposable absorbent materials to clean areas where grease may be spilled or dripped
- When using paper towels, use food grade paper to soak up oil and grease under fryer baskets
- Use towels to wipe down work areas
- Use absorbent materials under colanders in sinks when draining excess meat fat

### Food Waste Disposal/Recycling

- Used or spent oil and grease generated from fryers and other cooking equipment can be recycled through a rendering or recycling company.

### Food Grinders

- Food grinders should not be used in FSEs because the resulting large volume of food solids may clog drain pipes and/or fill grease traps and interceptors.

### Employee Education

- An Education Program on the BMPs should be implemented consisting of:
  - New employee training program
  - Frequent refresher training program
  - Kitchen BMP signage



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## **Practicas Mejores en el Manejo de la Cocina**

### Fregaderos y Desague

#### Coladeras del Desague

- Deben ser instaladas en todos los desagues.
- Deben tener aberturas dentro de 1/8" and 3/16"
- Deben ser removidas para facilitar limpieza.
- Deben ser limpiadas frecuentemente (deseche los residuos de comida visibles en el bote de basura.)

### Uso del Contenido de Grasa

- Heche todo aceite liquido y grasa de las ollas, cazuelas, y freidoras en un recipiente de grasa .
- Antes de lavar, raspe la manteca y grasas de las ollas, cazuelas, utensilios, coladeras, y tapetes en un recipiente.
- Use barriles de reciclar con tapas cuando colecta para colectar grasas y aceites.
- Vacie los restos de las canastas o cajas de las parrillas en un recipiente.

### Lavando los Trastes

- Use raspadores de jebe, enjugadores, o toallas para quitar la comida y toda la grasa, aceite y manteca que es visible en los trastes y de servir antes de lavarlos.
- Usando una toalla seca, limpie los residuos de comida y de grasas, aceites, y manteca en un bote de basura antes de lavarlos.

### Prevención de Derrames y Limpieza

#### Prevención Proactiva de Derrames y Procedimiento de Limpieza

- Desarrolle un procedimiento de limpieza de derrames y pongalo en un lugar visible.
- Desarrolle un programa de entrenamiento para los empleados acerca de los procedimientos.
- Designe un empleado quien supervise la limpieza.

### Prevención de Derrames

- Vacíe los recipientes antes que se llenen para evitar derrames accidentales.
- Proveer recipientes adecuados y portables para transportar materiales sin derramar.
- Use una tapa para transportar materiales de grasa al barril de reciclo.

### Limpieza de Derrames (BMP's)

- Tape el fregadero y los desagues del piso cerca del derrame.
- Limpie los derrames con toallas y materiales absorbentes.
- Use métodos de limpieza con agua solo para quitar los residuos.

### Uso de Materiales Absorbentes y Toallas

- Use materiales absorbentes y desechables para limpiar areas donde la grasa puede ser derramada o puede gotear.
- Cuando use toallas de papel, use papel de grado para comidas para absorber la grasa debajo de las canastas de freir.
- Use toallas para limpiar areas de trabajo.
- Use materiales absorbentes debajo de colanderas en fregaderos cuando exprima el exceso de grasa de las carnes.

### Deshaciendose de los Residuos de Comida/Reciclar

- Aceites usados y grasa generada de los aparatos de freir y otros aparatos de cocina pueden ser reciclados a traves de una compañía recicladora.

### Moedores de Comidas

- Moedores de comidas no deben ser usados en los establecimientos de servicios de comida ya que el gran volumen de comidas solidas pueden obstruir las cañerías del desagüe o llenar los interceptores y bloqueadores de grasa.

### Educación de los Empleados

- Un Programa de Educación en las Mejores Practicas en la Cocina debe ser implementado.
- Programa para entrenar a nuevos empleados.
- Programa frecuente de repaso, de entrenamiento.
- El cartel indicando las reglas de las Mejores Practicas en la Cocina.











## **WASTE HAULER RECEIPT DOCUMENTATION REQUIREMENTS**

The minimum information requirements to be documented on the hauler's receipt are:

- Name of hauling company
- Name and signature of operator performing the pumpout
- Documentation of full pumpout with volume of water and FOG removed (e.g., 1500 gallons)
- Documentation of the level of floating FOG and Settled Solids (to determine if volume exceeds 25% capacity of the grease removal equipment)
- Documentation if repairs to the grease interceptor are required
- Identification of the facility where the hauler is planning to dispose of the waste

# Definitions

**Best Management Practices (BMPs):** Schedules of activities, a prohibition of practices, maintenance procedures and other management practices to prevent or reduce the introduction of FOG to the Sewer Facilities.

**Change in Operations:** Any change in the ownership, food types, or operational procedures that have the potential to increase the amount of FOG generated and/or discharged by FSEs in an amount that alone or collectively causes or creates a potential for SSOs to occur.

**Collection system:** Means the pipes, junction boxes, channels, and other conveyance apparatus used to move stormwater or sewage.

**Discharge:** means the discharge, addition, placement, deposit, release, or dumping of any pollutant or combination of pollutants to surface waters from any point source. This definition includes, but is not limited to, additions of pollutants into waters from surface runoff and discharges through pipes, sewers, channels, or other conveyances owned by a state, municipality, or other person which do not lead to a treatment work.

**Effluent:** Any liquid outflow from the Food Service Establishment that is discharged to the sewer.

**Fats, Oils and Grease (FOG):** Any substance such as a vegetable or animal product that is used in, or is a by-product of, the cooking or food preparation process, and that turns or may turn viscous or solidifies with a change in temperature or other conditions.

**Food Service Establishment (FSE):** Is any commercial entity, operating in a permanently constructed structure such as a room, building, or place, or portion thereof, maintained, used, or operated for the purpose of storing, preparing, serving, or manufacturing, packaging, or otherwise handling food for sale to other entities, or for consumption by the public.

**FOG Program Manager:** Is the individual designated by the Water Resources Manager to administer the Grease Control Program. The FOG Program Manager is responsible for all determinations of compliance with the program, including approval of discretionary variances and waivers.

**Grease Interceptor:** Is a multi-compartment device that is required to be located, according to the California Plumbing Code, between a Food Service Establishment and the connection to the sewer system. These devices primarily use gravity to separate FOG from the wastewater as it moves from one compartment to the next. Grease Interceptors must be cleaned, maintained, and have the FOG and solids removed and disposed of in accordance with the City's best management practices guidelines.

**Grease Removal Devices:** Is a type of hydro-mechanical grease interceptor that automatically and mechanically removes non-petroleum fats, oils, and grease from the interceptor, the control of which is either automatic or manually initiated.

**New Construction:** Is any structure planned or under construction for which a sewer connection permit has not been issued.

**Remodeling:** Is a physical change or operational change that changes the amount of FOG discharged to the sewer system by the FSE in an amount that alone or collectively causes or creates a potential for blockages or SSOs to occur; or requires either a building permit or plumbing permit, and involves any one or combination of the following:

1. Under slab plumbing in the food processing area;
2. An increase in the net public seating area;
3. An increase in the size of the kitchen area; or
4. Any change in the size or type of food preparation equipment.

**SSO:** Is a sanitary sewer overflow.