Best Management Practice's
Fats, Oils, Grease and Solids for
Food Service Facilities

Lower Valley
WATER DISTRICT

Regulatory Enforcement Department
FOG Program

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FOG Program

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Fats, Oil, and Grease (FOG)
Best Management Practices (BNIP) for Food Service Facilities

A. Introduction

The Lower Valley Water District (LVWD) owns, operates and maintains approximately 400 miles of wastewater collection pipe. In order to protect the treatment facilities and the waterway from toxic, hazardous and untreatable pollutants, the District's FOG Program will regularly conduct inspections, monitoring, and educational outreach activities at businesses throughout the District to ensure compliance with sewer discharge regulations.

Development and implementation of Best Management Practices (BMPs) for certain commercial and industrial operations has long been recognized by EPA as an effective and flexible tool to limit the discharge of undesirable pollutants to wastewater treatments plants referred to as publicly owned treatment works (POTW). In 2006, EPA made changes to the National Pretreatment Regulations clarifying that POTWs can use BNfPs to regulate and control the discharge of specific pollutants but that the BMPs are fully enforceable as a Pretreatment Standard and food service facilities required to provide suitable and adequate grease and oil interceptors must regularly inspect, clean and maintain such interceptors in accordance with the established BMPs. Failure to do so subjects these businesses to enforcement action under Lower Valley Water District FOG Rule and Regulations.

B. Purpose of the Manual

Fats, oil, and grease (FOG) can have negative impacts on wastewater collection and treatment systems. Most wastewater collection system blockages can be traced to FOG. Blockages in the wastewater collection system are serious, causing sewage spills, manhole overflows, or sewage backups in homes and businesses. This manual is written to provide restaurant and food service-related business managers and owners information about FOG pollution prevention techniques focused on their businesses, effective in both reducing maintenance costs for business owners, and preventing oil and grease discharges to the sewer system. The discharge of FOG to the sewer system is illegal (Please report any illegal discharge). Ensuring that grease trap and grease interceptors are properly installed and most importantly, properly maintained, is the key to avoiding enforcement action against your business. This manual focuses on proper maintenance of grease traps and interceptors and includes inspection checklists for the business owner/manager as a guide to how and what LVWD FOG inspectors will be checking during an onsite inspection. Knowledgeable business managers can effectively prevent oil and grease buildup and associated problems for both the District and the restaurant owner.

C. Frequently Asked Questions about FOG

Why is grease a problem?

Large amounts of oil and grease in the wastewater causes trouble in the collection system pipes. It decreases pipe capacity and, therefore requires the piping systems to be cleaned more often raising costs for all ratepayers. Oil and grease also hamper effective treatment at the wastewater treatment facility. Grease may not appear harmful, but it congeals and causes grease buildup on the interior of pipes and other surfaces which may cause a shutdown of wastewater lift stations. Problems caused by wastes from restaurants and other grease-producing establishments are the reason the LVWD requires the installation of pretreatment equipment, commonly known as grease traps or interceptors.

Do I need a grease interceptor or trap?

Any establishment that introduces wastewater containing grease or oil into the sewage system is required to install an interceptor, or in limited cases, an interior grease trap. Interceptors are usually required for high volume fast food or full menu establishments and large commercial establishments such as hotels, hospitals, factories, or school kitchens. In some instances, interior grease traps may be allowed for small volume fast food or take-out restaurants with limited menus, paper plate service, minimum dishwashing, and/or minimal seating capacity.

Who determines if I need a grease trap or interceptor?

When wastewater pretreatment is required by the District, an approved grease trap or interceptor shall be installed according to the Uniform Plumbing Code. Lower Valley Water District FOG inspectors will assist the establishment in determining if a grease trap or interceptor is required and the appropriate sizing. Lower Valley Water District FOG inspectors make routine periodic inspections to verify that mandatory maintenance BNfPs are being implemented. These BMP's are fully enforceable under District Rules and Regulations.

Do I have a grease interceptor or trap?

If the establishment is uncertain whether it has a grease interceptor or trap, the owner should contact the Lower Valley Water District FOG program at (915)791-4480 ext. 1118 for assistance. You can receive free technical assistance by a District FOG Inspector without risk of an enforcement action. You will be required to comply with any requests for cleaning or other maintenance.

What is a grease interceptor and how does it work? A standard grease interceptor is a large capacity underground vault with at least two chambers installed on the gray water discharge from a kitchen facility. The large capacity of the vault slows down the wastewater, allowing oil and grease to float to the surface and solid material to settle out. These vaults are installed outside the building as near as possible to the source of oil/grease.

What is a grease trap and how does it work?

A grease trap is typically located under a sink or other kitchen fixture to which it is connected. Baffles in the trap interior slow the wastewater down long enough for the grease to separate and rise to the surface. The grease can then be removed and disposed properly.

Electro-mechanical devices require less manual maintenance and are more efficient because accumulated FOG is automatically removed daily. Passive grease traps are also allowed in the new construction of food service establishment.

How do I clean my grease trap or interceptor?

Grease trap maintenance may be performed by facility maintenance staff or other employees of the establishment with written permission from the LVWD FOG program. Maintenance or cleaning record must be available for inspector to review upon request. Trap material can be solidified and placed in the dry trash.

Grease trap/interceptor maintenance and cleaning must be performed by permitted haulers. Cleaning consists of removing the entire volume of liquids and solids from the interceptor and properly disposing of the material in accordance with all Federal, State, and/or local laws.

Can you recommend a grease interceptor maintenance schedule?

The Texas Commission on Environmental Quality (TCEQ) requires that grease trap/interceptors be cleaned at a minimum of every 90 days. Some establishments will find it necessary to clean their interceptors more often. In some instances, light menu, low volume facilities may be able to clean less frequently. The maximum exemption to pumping frequency allowed is 6 months. Demonstrating through accurate recordkeeping that a less frequent cleaning schedule is fully adequate is the responsibility of the business owner/manager. It is not the responsibility of the LVWD. Securing a service contract with a qualified pumping contractor for routine inspection and cleaning as needed is the best way to avoid enforcement action by the District. Waiting until a District inspector arrives on site and requires you to clean your interceptor is not an acceptable best management practice and may result in an enforcement action.

What if I don't take care of my grease trap or interceptor?

Failure to implement the required FOG BMP's is a violation of the Lower Valley Water District Rules and Regulations and can be fined up to five hundred dollars. Additionally, if the establishment fails to adequately maintain its trap or interceptor, it will eventually encounter a maintenance problem with a plugged building sewer line. The blockage can create a sewer backup situation and ultimately a potential health problem in the establishment. If the problem is in the building sewer line, then the establishment has direct responsibility for paying for the maintenance. If the blockage or restriction occurs in the District sewer main line, then the establishment will have to pay for the District's line cleaning maintenance costs. The discharge of grease to a sanitary sewer line in amounts "which will or may not cause obstruction" is a violation of the Lower Valley Water District's Rules and Regulations and may result in enforcement action including cost recovery, fines and other penalties including recommendation to terminate water service.

What are the criteria for inspecting grease traps/interceptors?

All food service establishments are inspected for compliance with BMP's. Table 1 provides the general criteria used by FOG inspectors during trap or interceptor evaluation and are offered here for informational purposes only. The judgment of the onsite inspector is final.

Table l . Grease Trap/Interceptor Inspection Criteria

Hydraulic capacity (%)	Condition	Inspector Action
10%	Good	Check records for last date cleaned Maintain normal schedule
10-20%	Fair to Poor	Check next scheduled date for cleaning Advise facility to schedule soon Order revision of cleaning schedule as necessary
>25%	Non-Compliance	Order immediate cleaning Order prescribed cleaning schedule Re-inspection

- If a trap is in FAIR to POOR condition, the facility should be advised to schedule a cleaning event in the near future. The cleaning frequency schedule may need to be increased.
- If the trap is in PENDING ACTION, the facility is issued a compliance order to have it cleaned immediately. The facility is required to call, fax, or e-mail the manifest information within 5 days to verify that the trap or grease interceptor has been properly cleaned. An enforcement action including fines and /or penalties may be taken against the facility.

D. **Best Management Practices (BN'1Ps) Requirements**

Properly maintaining interceptors and traps

Interceptors: Clean the interceptor routinely; at least every 90 days, unless a facility can demonstrate a less frequent schedule is adequate. Securing a service contract with a qualified pumping contractor for routine inspection and cleaning as needed is strongly advised. **Reason**: Grease interceptors must be cleaned routinely to ensure that grease accumulation does not limit retention time and separation efficiency resulting in pass through of grease to the sewer. **Note**: The cleaning frequency is a function of the type establishment, the size of the interceptor, and the volume of flow discharged by the establishment.

Types of Grease Traps

Passive Type Grease Traps.
Passive Type Grease Traps: In the care of passive type grease traps, if self-cleaning is allowed, clean weekly. If using a qualified pumping contractor follow the 90-day rule unless the facility can demonstrate a less frequent schedule is adequate, or a FOG inspection shows that more frequent cleaning is required. Accurate cleaning records or logs are required to be kept on site. **Reason**: If passive traps are more than 25% full when cleaning weekly, the cleaning schedule needs to be increased or install a larger grease trap. **Note**: If the grease trap is not providing adequate protection, the District can require installation of additional grease abatement equipment.

Electro-mechanical automatic traps
Electro-mechanical automatic traps: Removes grease from inside the unit into a separate container, empty grease collection container daily. Clean solids strainer daily. Clean wiper blades weekly. Never remove flow restrictor from unit. Keep a maintenance log, log sheets can be obtained from your FOG inspector. **Reason**: Solids take up capacity and can cause odors. Grease trap/interceptor maintenance records are required to ensure that the proper maintenance is performed on a regular basis. Keep maintenance log sheet on site. **Note**: Adequate maintenance ensures maximum efficiency of the grease abatement unit.

Recommended Best Management Practices (BMPs) for General Kitchen Operations

Supervise all grease trap or interceptor cleanings to ensure proper cleaning.

- Do Not put enzymes or additives directly into interceptors or traps to reduce your cleaning schedule.
- Train kitchen staff to scrape excess food particles and liquid grease into dry trash or a separate container. Use paper towels to wipe excess grease from utensils and work areas.
- Post FOG poster above sinks and dishwasher.
- If clean-up sink drains to an under the sink trap, lower final discharge temperature as not to melt grease and pass thru trap.
- Clean up grease spills with absorbent materials.
- Clean hood filters and kitchen floor mats, discharge wastewater to your interceptor. • Collect used grease and oil in a proper container. Check for possible leaks, avoid overfilling the grease drums. Ensure drum lids are tight.

E. Prohibited Discharge Standards related to Grease (FOG)

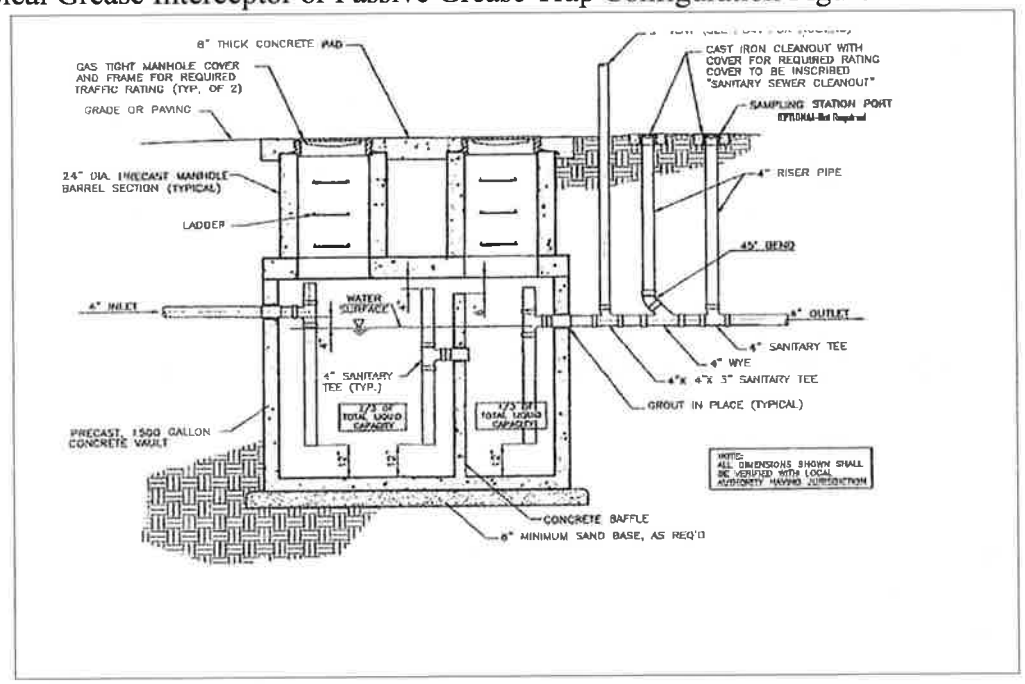
The following are prohibited under the Lower Valley Water District Rules and Regulations.

- Discharge of fats, oil, and grease in amounts that can or may cause an obstruction to the flow in a sewer is prohibited.
- Direct introduction of enzymes, bio-additives, emulsifying agents or other similar chemicals is prohibited.
- Each business establishment that is required to have a grease interceptor shall serve only that establishment and no other.

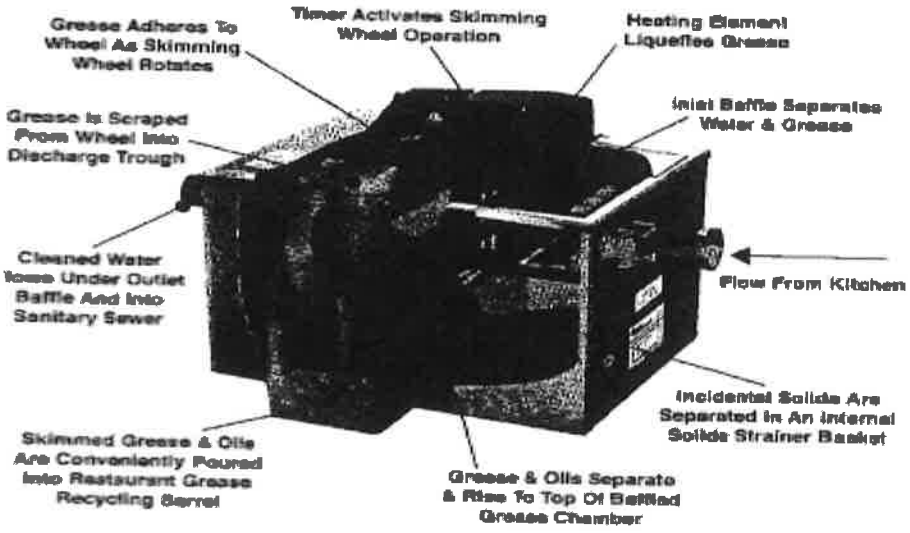
F. How Grease Interceptors Work

Oil and grease floats on the water surface and accumulates behind the grease retaining fittings (inlet tee and outlet tee connections figure l) and the wall separating the compartments. The oil and grease will be removed during routine grease interceptor cleanings. Solids in the wastewater that do not float will be deposited on the bottom of the grease interceptor and will need to be removed during routine grease interceptor cleaning. The inlet tee and outlet tee pipes extend down into the water to within 12 inches of the bottom of the interceptor. Because grease floats, it generally does not enter the tee pipe and is not carried into the next compartrnent. The tee pipes extend above the water surface to provide air relief. Flow exits the interceptor through the outlet pipe and continues to the sanitary sewer system.

Typical Grease Interceptor or Passive Grease Trap Configuration Figure 1



Electro-Mechanical Trap (Automated Grease Interceptor AGI) Figure 2



H. **Grease Interceptor Cleaning Contractors**

The following list of contractors are independent vendors who provide cleaning service in the local area. These vendors are registered with the TCEQ. Note: The Lower Valley Water District does NOT recommend any vendor.

Lower Valley Water District's FOG program charges an annual inspection fee of fifty dollars. Any violations of Lower Valley Water District may result is fine and or penalties including termination of water service.

Registered Companies

A&A GTS	(915)787-9928
Affordable Pump Service	(915) 253-0895
Black Tie Sanitation	(915)852-2222
Dunn's Pump Service	(915)751-2966
E&R Pump Service	(915)851-3759
EZ Pump Service	(915)449-8118
Henry's Cesspool	(915)877-3117/ 726-2479
Ivan's Pumping Service	(915)859-3469
Macheja Green Solutions	(915)540-0813
OK Pump Service	(915)858-8917
OK Waste Management	(915)588-6188
Sarabia's	(915)544-9022
Valley by Products Inc	(915)877-3131