A Guide to Restaurant Grease Management

A Regulator's Desk Reference

Interagency Resource for Achieving Cooperation (*IRAC*)

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About Interagency Resource for Achieving Cooperation (*IRAC*):

The Interagency Resource for Achieving Cooperation (*IRAC*) is part of the Local Hazardous Waste Management Program in King County. *IRAC* is a forum for regulators from different agencies to work together sharing their diverse perspectives in addressing regulatory conflicts or gaps.

Disclaimer:

This publication provides research information and practical guidance regarding the handling, storage and disposal of restaurant grease within King County. It is not intended to be a complete reference to all laws and regulations; local jurisdictions may have regulations that differ from the recommendations in this report.

Additional copies of this report:

A PDF version of "***Restaurant Grease; A Regulator's Guide***" is available at:
http://www.lhwmp.org/IRAC/resources/publications.aspx *2010 - rev

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Introduction.

The IRAC Restaurant Grease Management Workgroup was formed to address the problem of grease entering the storm drainage system and sewers from improper grease handling and storage practices.

The goals of the workgroup:

- **Provide information and guidance to regulators and food service establishment operators about how best to collect, store, and dispose of fats, oils, and grease generated from the preparation of food.**
- **Provide regulators with information and guidance for conducting inspections of food service establishments.**
- **Provide outreach materials for assisting food service establishments.**
- **Provide regulators with an information matrix list for sewer districts in the King County region.**
- **Provide food service establishments with a list of contractors and service providers.**

Table of Contents

Section 1: Universal Standards

NOTE: These standards were compiled by the IRAC Restaurant Grease Management workgroup to provide over-all guidance for the acceptable handling, storage, and disposal of grease at food service establishments. These standards should be considered best management practices and design standards for kitchens as well as inside and outside grease storage areas.

- Use, store and dispose of grease properly.
- Don't dispose of grease to the storm or sanitary sewers.
- Collect fryer and cooking grease in watertight containers.
- Don't leave the lids to grease bins open to the weather.
- Keep collection bins or barrels in areas protected from traffic and the weather and away from drains.
- Keep collection bins in an area where spills will be contained or directed to the sanitary sewer.
- Clean up grease spills by scraping up as much as possible before mopping.
- Absorb oil spills with sphagnum moss or other dry oil absorbent. Place the used absorbent inside two plastic bags or other sealed container and dispose of it in the trash.
- Clean hood filters in sinks that flow to grease retention devices attached to the sanitary sewer. Do this on a frequent basis.
- Dispose of kitchen floor mop water to sinks that flow to grease retention devices attached to the sanitary sewer.
- Use low emulsion-type soaps for floor and hood cleaning.
- Connect trash compactors to the sanitary sewer or place them on pads that have a drain connected to the sanitary sewer.

Section 2: Inspector Guidelines

Inspection Procedures for Grease Interceptors and Grease Traps

Grease interceptors and traps reduce the likelihood of sanitary sewer overflows caused by grease from food services. Inspections are performed to ensure compliance with local discharge limits for fats, oils, and grease. This procedure describes how to inspect grease interceptors and traps, how to determine which interceptors or traps require inspection, and how to determine the quantity of grease accumulated in each device. It also includes information on the equipment used when doing inspections, a description of grease interceptors and traps, and how to inspect each device.

NOTE: All grease retention devices should be inspected for discharge compliance at least quarterly.

Inspection Equipment Lists

Equipment needed for inspecting grease interceptors and traps is provided below.

For Grease Interceptor Vaults

Manhole puller	Thread Tap for manhole bolt holes
Small sledge hammer	WD-40 or other lubricant
Mirror	Extra manhole bolts
Flashlight	Probe to check depth and condition of baffle tees
Ditch spade (shovel with narrow blade)	Disposable gloves
8’ clear plastic tube (fluorescent light safety cover)	Paper towels
Portable pH meter	Sample cup on a rope or sample pump
Sample bottle provided by laboratory	
Sample inspection log sheet	

For Grease Traps

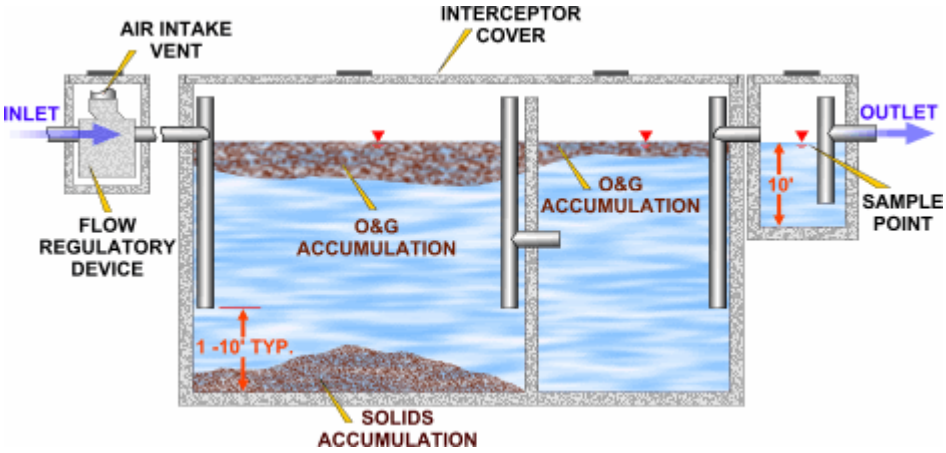
Large flat head screw driver
Large adjustable wrench
Other hand tools, including hex head or star head driver (may be required to open trap lid)
Clean-out plug wrench
2’ to 4’ clear plastic tube (fluorescent light safety cover cut to size)
Portable pH meter
Sample bottle provided by laboratory
Sample inspection log sheet
Small shovel or garden trowel
Disposable gloves
Paper towels
Flashlight
Turkey baster for sampling discharge water

Grease Interceptors

Description

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 (see figure below). 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.

The vault has a concrete lid with manhole openings in the top. These allow access into the vault for cleaning and for inspection of vault components, and they allow for visual inspection of all interior baffle tees. These baffle tees are usually made of 6" PVC. Vault capacity is determined using a calculation provided in the Uniform Plumbing Code (see the most current version of UPC for calculation). The vault also must meet the standard specifications of the local jurisdiction.



Inspection Procedures

1) Open lid(s) covering all chambers of the interceptor vault.
2) Visually inspect inlet baffle tee and note any problems.
3) Determine inlet pH (if desired) using a portable pH meter.
4) Determine depth of grease blanket, including both liquid and solid grease, and note this on the inspection log. The depth of the grease blanket can be determined using either of two methods:
   a) Push the blade of a ditch spade (narrow blade shovel) into the grease blanket until no more resistance is felt. Pull the shovel out, making a hole in the grease blanket, and estimate the depth of the blanket.
   b) Using a clear plastic tube, obtain a core sample of the interceptor. Prepare the tube by routing a length of braided fishing leader through the tube (tying a small weight to the leader will aid in this task) and attach the leader to a rubber stopper with an eye-bolt inserted through it.
   Holding the tube vertically, push it through the grease blanket to the bottom of the interceptor and pull the plug into place with the fishing leader. Placing a cap or stopper on the upper end of the tube will help in keeping the leader taught and the plug in place.
   Pull the tube up and measure the amount of grease and solids in the interceptor. Empty the contents of the tube back into the vault and dispose of the tube in the on-site garbage, if available. Keep the stopper with eyelet for future use.

5) Inspect the inlet and baffle tees, if visible, and note any problems on the inspection log . If the baffle tee isn't visible and there are three lids over the vault, it may be visible under the center lid. To determine the depth of the tees, use a probe at least 10 feet long with something on the end that can hook onto the edge of a pipe. Two 5-foot sections of ¾ inch PVC pipe that screw together in the middle and have caps on the ends works well. This can also be used to determine if the baffle tee is in place in the event that it is not visible from above.
6) Inspect discharge tee and note any problem s on the inspection log. Look for accumulation of grease on the walls of the tee or in the discharge. Look for rainbow sheen on the discharge flow.
7) Determine pH of discharge flow (if desired) using a portable pH meter.
8) Determine depth of grease blanket using procedure noted in #4 above.
9) Take sample of discharge flow (if desired).
10) Be sure to replace all access lids.
11) Leave the interceptor vault in the same condition in which it was found. If the lids were bolted down, re-bolt them, etc.
12) If any baffle tees are missing, or if there is significant grease (> 25 % of the static liquid volume), inform the facility manager or person in charge. Note the name of the person you talked to and the content of the discussion.

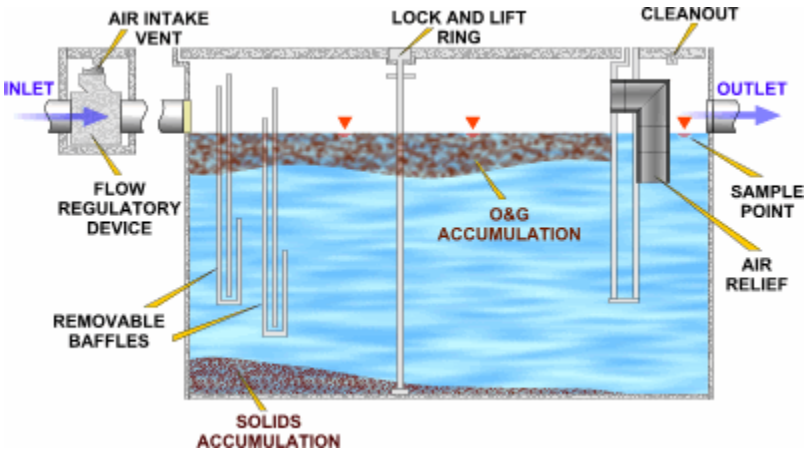
Grease Traps

Description

Grease traps are made of rust resistant metal and can be installed above or below the floor level, usually in the kitchen near the fixtures that discharge to them. A grease trap has a much smaller capacity than a grease interceptor vault (see figure below). .

A solid metal lid is usually affixed to the grease trap body with a screw on each corner, although some lids have one large screw or bolt in the middle of the lid. Some grease traps have a separate discharge section with a clean-out plug at the top of the section.

Up to four fixtures can be connected to a grease trap, and the trap is sized according to the number of fixtures that can connect to it. Sizing criteria can be found in the Uniform Plumbing Code.



Inspection Procedures

1) Open the lid covering the grease trap and visually inspect all visible internal components and note any problems
2) Determine depth of grease blanket, including both liquid and solid grease, and determine the quantity of solids at the bottom. The following two methods can be used to determine the depth of the grease blanket.
    1. Push the blade of a small garden shovel or trowel into the grease blanket until no more resistance is felt. Pull the shovel out, making a hole in the grease blanket and estimate the depth of the blanket.
    2. Using a clear plastic tube and rubber stopper, pull out the contents of the grease trap. (This process works similar to holding your finger over the end of a straw and pulling the liquid up when you lift the straw.) Follow these steps:
        - i) Hold the tube vertically and push it to the bottom of the grease trap.
        - ii) Plug the top opening of the tube with a rubber stopper, making sure the plug is tight enough to create a vacuum.
        - iii) Pull the tube up, stopping just before the bottom of the tube comes up out of the grease blanket.
        - iv) Note the layers of grease blanket, liquid and solids in the trap.
        - v) Empty contents of tube into the trap and dispose of the tube in the garbage on-site, if available.

3) Collect a sample of the discharge flow (if desired).
4) Close the grease trap lid.
5) Leave the trap in the same condition in which it was found. If the lid was bolted down, re-bolt it.
6) If any of the grease retention components are missing, or if there is significant grease leaving the trap in the discharge (that is, enough to pose a threat of blockage), inform the facility manager or person in charge prior to leaving the site. Note the name of the person and the content of the discussion.

Section 3: Regulators' Outreach Materials

NOTE: The following documents and templates may be provided to restaurants to guide them through a grease management program.

▪ Restaurant owner guidelines for implementing a grease reduction program:

There are many ways to cut down on your grease output and avoid costly maintenance and fines. By using common sense and good housekeeping practices and by reducing the accumulation of grease, you can minimize your impact on the sewer system and avoid costly cleanup of grease spills.

Pretreatment Methods: All pretreatment methods require a commitment to maintenance and, in most cases, a change in kitchen management policies. If you install a pretreatment device, remember that extremely hot water and solvents defeat the purpose of pretreatment devices by keeping the grease suspended in the gray water. Vendors can provide assistance on installation, maintenance, and information. They are listed in the Yellow Pages (see also Appendices A and B).

- **Recycle grease and oils when possible**: When using deep fat fryers, or processes that produce large amounts of plant or animal byproducts, separate the oils and fats from the food products. Recycle the fat and food products through one of the area grease rendering companies or food recyclers. If food recycling isn't an option, dispose of food products in sealed containers with your solid waste. In the future there may be better options for composting food waste.

- **Avoid using the food disposal**: Disposals and food grinders are bad for your system because they allow grease and food to leave your system ground up and suspended in liquid. These byproducts drop out and adhere to the walls of the pipe, fill up your pretreatment devices, and create a potential future backup.

- **Install grease traps:** These go inside the building near the sink and act as a holding facility for kitchen water before it is discharged into the side sewer. Grease traps usually require constant cleaning (every day for many businesses), but when sized and properly maintained, they effectively remove grease from kitchen wastewater.

- **Install a grease interceptor**: A grease interceptor is a large tank or vault (usually 750 gallons or larger) is installed outside the building and provides the most efficient way to remove grease and oils. However, it requires routine maintenance. The amount of maintenance depends on your use. Both grease interceptors and grease traps should be sized according to the Uniform Plumbing Code or other local standard.
- **Use of bacteria (bugs):** Get permission from your local sewer agency before using these products.
- **Grease removal devices**: Several types of skimmers or dippers can mechanically remove grease from kitchen wastewater. They should be emptied and cleaned regularly.

Notice: If your establishment discharges more than the maximum amount of grease allowable, you may be liable for damage claims and cleaning costs resulting from grease discharges.

Education and Housekeeping: Periodic cleaning of the pretreatment device is imperative to insure that it is working properly. If no device exists, it is critical that kitchen staff understand how to clean dishes—that is, they must pre-scrape food waste into the solid waste, keep sink strainer baskets clean and replaced when necessary, etc.. Grease prevention procedures must be part of the standard training of new employees.

Good housekeeping is the first step in a good grease reduction program.
Here are some tips to help you eliminate grease before it becomes a problem:

- **Deep Fat Fryer:** Put waste grease in a container then pour it into the rendering barrel for recycling. Wipe the fryer down with paper towels and dispose of them with solid waste. Wash out the remaining the grease (there shouldn't be much).
- **Grill and Roaster/Broiler:** Empty drip pans into the rendering container and wipe everything off with paper towels. Dispose these with the solid waste. Any remaining grease can be washed.
- **Gravy and Sauce:** Wipe greasy pans and dishes prior to washing, putting leftover material into the rendering container. Residues should go out with the solid waste.
- **Frosting Containers:** Pre-scrape containers and wipe them with paper towels. Attempt to recycle or reuse large quantities and dispose of small quantities in the solid waste.
- **Butter and Butter by-products:** Pre-scrape utensils and containers prior to washing and dispose of non-recyclable materials in the solid waste.
- **Meat Scraps and Trimmings:** Wipe meat processing equipment clean with a paper towel prior to cleaning and put meat trimmings into the rendering container. Recycle floor sweepings or put them in the solid waste.
- **Avoid using the Garbage Disposal:** Garbage disposals send unwanted food byproducts into the sanitary sewer where they will drop out of solution, build up on the walls of your side sewer, and cause a backup.
- **Keep your Sink Strainers in place:** The best way to stop backups is to eliminate the source. Small food particles should be cleaned often from sink strainers and disposed as solid waste.
- **Recycle unprepared Food Waste:** Recycling is the preferred method of disposing of significant volumes of food waste. Most recycling companies provide rendering barrels or food waste barrels. Small quantities of food can be disposed in the solid waste if it's in a plastic bag or container.(See Appendix B for Contractor List)
- **Maintain Traps and Interceptors:** Small kitchen-sized traps should be cleaned at least weekly, sometimes more often. This can be done in-house, usually after hours, by kitchen staff. Larger vault-sized interceptors should be cleaned on a regular cycle, depending on the amount of grease accumulated.

▪ Spill Prevention and Cleanup

NOTE: These are recommendations for businesses to follow for spill prevention and cleanup:

- Store and transport liquids in containers with tight-fitting lids.
- Regularly inspect containers for leaks.
- Develop and implement an emergency spill prevention plan (see attached template). The plan should be posted at appropriate locations in the building (near areas that have a high potential for spills).
- Put an emergency spill containment and cleanup kit near the spill prevention plan.
- Train all employees about the plan and kit.
- Clean up all spills properly and immediately.

▪ Spill Prevention and Cleanup Plan (Template)

NOTE: This form might be used to provide a guideline for developing a written spill prevention plan. A spill kit should be part of the plan. It is recommended to post and educate employees about the plan when completed.

Company Name: _____
Address: _____
Phone Number: _____

Describe primary facility activities:

_____
_____
_____
_____

List types of chemicals used at the facility:

Provide Contact Names and Phone numbers for the following in the table below:

	Contact Names	**Contact Phone Numbers**
Owner		
Onsite Spill Cleanup Coordinator(s)		
Agencies to contact in the event of a spill. (i.e., Local City, County, and State agencies)		

Provide a small facility map that includes the following information:

- Location of Spill Kits
- Waste Storage areas
- Chemical Storage Areas
- Locations of Catch Basins on the Facility Property

Provide a short description of emergency cleanup and disposal procedures:

a) _____
b) _____
c) _____
d) _____

Spill Contact Directory: (Example)

The following are examples of important agencies to list in a spill prevention plan:

Washington State Department of Ecology (NW region)	(425) 649-7000
Fire Department	911
King County Industrial Waste (Monday thru Friday, business hours)	(206) 263-3000
King County Public Health	**(**206) 296-4600
Seattle Public Utilities	(206) 386-1218
Seattle Surface Water Quality Hotline	(206) 684-7587
After Hours Seattle Drainage Emergency Response	(206) 386-1849

Useful resources for regulators and restaurants:

NOTE: Always respect copyrights when reprinting original material.

- Stormwater Journal; http://www.forester.net/sw.html
- EPA-NPDES regulations; http://www.epa.gov/OWM/mtb/spillprv.pdf
- Green Plan for The Food Service Industry; www.p2pays.org/food/main/oil.htm
- Washington Restaurant Association; www.wrahome.comhttp://www.des.nh.gov/SWTAS/greaseDisposal.htm
- Pollution Prevention Regional Information Center; http://www.p2ric.org/
- King County FOG page; http://dnr.metrokc.gov/wlr/indwaste/fog.htm
- North Carolina FOG poster; http://www.p2pays.org/ref/13/12327.pdf
- North Caroline FOG poster (Spanish version); http://www.p2pays.org/ref/13/12311.pdf
- King County map page; http://dnr.metrokc.gov/wlr/indwaste/map.htm

▪ Grease Trap Operation and Maintenance (TEMPLATE)

Note: This form may be used to track maintenance of grease traps inside of the building. Proper maintenance can help reduce stoppages in the plumbing and reduce blockages forming in main lines of the sewer collection system. Completion of this form will show the business's record of the maintenance for the equipment in service.

Company Information

Company Name: _____ Site Address: _____

Date	Maintenance Performed[1]	Quantity Removed[2]	Maintenance Performed By[3]	Signature of Responsible Party[4]

1. Please mark one of the following: Cleaned (Grease/oil Removal), Inspected, or Pumped by professional cleaner.
2. List the quantity of grease and/or oil removed in approximate gallons.
3. Note the name of the employee and/or the company performing maintenance
4. The signature can be your employee or the employee of the company performing maintenance.

▪ Choosing a Sewer Contractor:

NOTE: If you have had re-occurring problems, chances are you already have a contractor. Find someone with a proactive treatment program that will work to solve your problem and reduce your maintenance cost, not just jet your sewer lines. The following are some of the things a good contractor should offer:

Education: The contractor should work with the kitchen staff to identify sources of grease and look for ways of eliminating them. They should also instruct the kitchen staff on alternatives to current practices that could be adding to the problem.

Maintenance: In addition to rodding and jetting, the full service contractor should set up a maintenance schedule and log book for any existing pre-treatment device, and assign the duties of cleaning the device to kitchen personnel. In the case of large separators, the contractor may inquire as to the maintenance schedule, and make recommendations for adjusting the cycle of cleaning if grease buildup persists.

Follow up: The contractor should check back periodically to insure the grease program they have implemented is still working. This includes checking the interceptor, log books, and talking with the kitchen staff. A good contractor should provide you with a program that will reduce the amount of jetting required for keeping your line clear, thus reducing your annual maintenance cost.

Pre-treatment Devices: Small devices require frequent maintenance and are less efficient. Larger devices allow for a greater storage time and more grease retention. Mechanical separators are fairly small units and work well as long as they are cleaned and maintained on a daily basis.

Section 4: Best Management Practices Manual for Fats, Oil, and Grease

Information, Pollution Prevention, and Compliance Information for Publicly-Owned Treatment Plants

NOTE: This manual was developed from a document produced by Brown and Caldwell for the Oregon Association of Clean Water Agencies (OACWA). This King County manual includes several modifications of the original document.

The original Brown and Caldwell/OACWA document was funded in part by the Oregon Department of Environmental Quality, through its Pollution Prevention Incentives for States grant awarded by the federal Environmental Protection Agency (Source: http://www.oracwa.org).

Fats, oil and grease, also called FOG in the wastewater business, 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.

Two types of FOG pollutants are common to wastewater systems. Petroleum-based oil and grease (non-polar concentrations) occur at businesses using oil and grease, and can usually be identified and regulated by municipalities through local limits and associated pretreatment permit conditions. Animal and vegetable-based oil and grease (polar concentrations) are more difficult to regulate due to the large number of restaurants and fast-food outlets in every community.

This manual is written to provide municipal pretreatment staff, plus restaurant and fast food business managers and owners, with information about animal and vegetable-based oil and grease pollution prevention techniques for food service establishments. Use of the information provided in this manual can be effective in both reducing maintenance costs for business owners, and preventing oil and grease discharges to the sewer system.

Many of the nation's fast-food restaurant chains participate in FOG recycling programs. Ensuring that grease trap and grease interceptors are properly installed, and most importantly, properly maintained is more difficult. This manual focuses on proper maintenance of grease traps and interceptors, and includes inspection checklists for municipal pretreatment inspectors.

Knowledgeable municipal pretreatment staff, working with business owners, can effectively prevent oil and grease buildup, and associated problems, for both the sewerage agency and the restaurant owner.

Manual Contents

Frequently Asked Questions About Grease:

Is grease a problem?

In the sewage collection and treatment business, the answer is an emphatic YES! Grease is singled out for special attention because of its poor solubility in water and its tendency to separate from the liquid solution.

Large amounts of oil and grease in the wastewater cause trouble in the collection system pipes. It decreases pipe capacity and, therefore, requires that piping systems be cleaned more often and/or some piping to be replaced sooner than otherwise expected.

Oil and grease also hamper effective treatment at the wastewater treatment plant. Grease in a warm liquid may not appear harmful. But, as the liquid cools, the grease or fat congeals and causes nauseous mats on the surface of settling tanks, digesters, and the interior of pipes and other surfaces which may cause a shutdown of wastewater treatment units.

Problems caused by wastes from restaurants and other grease-producing establishments have served as the basis for ordinances and regulations governing the discharge of grease materials to the sanitary sewer system. This type of waste has forced the requirement of the installation of preliminary treatment facilities, commonly known as grease traps or interceptors.

What is a grease trap and how does it work?

A trap is a small reservoir built into the wastewater piping a short distance from the grease producing area. Baffles in the reservoir retain the wastewater long enough for the grease to congeal and rise to the surface. The grease can then be removed and disposed properly. See the "*How It Works"* section for a description of how the various components of a grease trap function.

What is a grease interceptor and how does it work?

An interceptor is a vault with a minimum capacity of between 500 and 750 gallons that is located on the exterior of the building. The vault includes a minimum of two compartments, and flow between each compartment is through a 90 degree fitting designed for grease retention. The capacity of the interceptor provides adequate residence time so that the wastewater has time to cool, allowing any remaining grease not collected by the traps time to congeal and rise to the surface where it accumulates until the interceptor is cleaned. See the "*How It Works"* section for a description of how the various components of a grease interceptor function.

Do I need a grease trap or interceptor?

Any establishment that introduces grease or oil into the sewage system in quantities large enough to cause line blockages or hinder sewage treatment is required to install a grease trap or interceptor. Grease interceptors are usually required for high volume restaurants (full menu establishments serving more than 40 meals per peak hour) and large commercial establishments such as hotels, hospitals, factories, or school kitchens.

Grease traps are required for small volume (fast food or take-out restaurants with limited menus, minimum dishwashing, and/or minimal seating capacity) and medium volume (full menu establishments operating 8-16 hrs/day and/or serving less than 40 meals per peak hour) establishments. Medium volume establishments may be required to install an interceptor depending upon the size of the establishment.

Do I have a grease trap or interceptor?

If the establishment is uncertain whether it has a grease trap or interceptor, the owner should contact the local sewer agency for the community served.

Is the grease trap I have adequate?

The Uniform Plumbing Code requires that no grease trap have a capacity less than 20 gallons per minute (gpm) or more than 55 gpm. The size of the trap depends upon the number of fixtures connected to it. The following table provides criteria for sizing grease traps:

Total number of fixtures connected	Required rate of flow, gpm	Grease retention capacity, lbs
1	20	40
2	25	50
3	35	70
4	50	100

How do I clean my grease trap or interceptor?

Refer to the "Grease Trap and Interceptor Maintenance" section.

Can you recommend a maintenance schedule?

Some establishments will find it necessary to clean their traps more often than once each week. If the establishment has to clean it too often, the owner should evaluate the effectiveness of food and grease handling practices. The owner also should consider installing a larger trap or interceptor. All grease interceptors should be cleaned at least twice each year.

If a grease trap is not maintained regularly it will not provide the necessary grease removal. The establishment should work out a specific cleaning schedule that is right for the establishment. All grease traps need to have the grease cleaned out periodically and no one likes to do the job. It is a dirty job. Running extremely hot water down the drain only moves the problem down stream. It does not go away. Catch the grease at the source! This is the most economical means to reduce all costs.

What if I don't install a grease trap?

If the establishment uses grease and oil in food preparation, 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. Someone will have to pay for removing the blockage. 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 is in the public sewer main and it can be proven that the establishment is the cause of the blockage, then the establishment may have to pay for the public sewer to be maintained. Blocking a sanitary sewer line is also a violation of the federal Clean Water Act.

Who determines if I need a grease trap or interceptor?

When waste pretreatment is required by the local jurisdiction, an approved grease trap or interceptor must be installed according to the Uniform Plumbing Code or other standard of the local jurisdiction.

How can I get in compliance?

The establishment should contact its local jurisdiction.

What are the criteria for inspecting grease traps?

All food service establishments suspected of causing problems to the collection system or treatment facilities will be inspected. Some agencies use the following criteria to inspect grease traps:

Percent of Trap Filled	Trap Condition
25	Good
25 – 50	Fair
>50	Poor

If the trap is in "FAIR" condition, the establishment should be advised to keep an eye on the maintenance schedule. The cleaning frequency may need to be increased. If the trap is in "POOR" condition, the establishment may be issued a compliance order to have it cleaned immediately. The establishment may then be required to contact the local jurisdiction within 30 days to verify that the grease trap has been properly cleaned.

Best Management Practices (BMPs)

- **Prevent Blockages in the Sanitary Sewer System.**
- **Properly Maintain Grease Traps and Interceptors to Prevent Introduction into the Sanitary Sewer System**
- **Prevent Fats, Oil, and Grease From Entering Creeks and Streams Through the Storm Drain System**

Prevent Blockages in the Sanitary Sewer System (Part 1 of 2)

BMP	Reason For	Benefits to Food Service Establishment	Pretreatment Inspection Tips
Train kitchen staff and other employees about how they can help ensure BMPs are implemented.	People are more willing to support an effort if they understand the basis for it.	All of the subsequent benefits of BMPs will have a better chance of being implemented.	Talk to the establishment manager about the training program that he/she has implemented.
Post "No Grease" signs above sinks and on the front of dishwashers.	Signs serve as a constant reminder for staff working in kitchens.	These reminders will help minimize grease discharge to the traps and interceptors and reduce the cost of cleaning and disposal.	Check appropriate locations of "No Grease" signs.
Use water temperatures less than 140° F in all sinks, especially the pre-rinse sink before the mechanical dishwasher. The mechanical dishwasher requires a minimum temperature of 160° F, but the Uniform Plumbing Code (UPC) prohibits discharging the dishwasher to grease traps.	Temperatures in excess of 140° F will dissolve grease, but the grease can re-congeal or solidify in the sanitary sewer collection system as the water cools.	The food service establishment will reduce its costs for the energy – gas or electric – for heating the water.	Check boiler or hot water tank discharge temperature. Measure the temperature of the hot water being discharged from the closest sink.

Prevent Blockages in the Sanitary Sewer System (part 2 of 2)

BMP	Reason For	Benefits to Food Service Establishment	Pretreatment Inspection Tips
Use a three-sink dishwashing system, which includes sinks for washing, rinsing, and sanitizing in a 50-100 ppm bleach solution. Water Temperatures are less than 140° F. (See previous BMP)	The three-sink system uses water temperatures less than 140° F where a mechanical dishwasher requires a minimum temperature of 160° F. (See above) Note: The Uniform Plumbing Code (UPC) prohibits the discharge of dishwasher water to grease traps.	The food service establishment will reduce its costs for the energy - gas or electric - for heating the water for the mechanical dishwasher and for operating the dishwasher.	Measure temperature of the hot water at the three-sink system.
Recycle waste cooking oil.	There are many waste oil recyclers throughout Washington.	The food service establishment may be paid for the waste material and will reduce the amount of garbage it must pay to have hauled away.	Obtain name of recycler used. Review recycling records. Confirm records with recycler.
"Dry wipe" pots, pans, and dishware prior to dishwashing.	The grease and food that remains in pots, pans, and dishware will likely go to the landfill. By "dry wiping" and disposing in garbage receptacles, the material will not be sent to the grease traps and interceptors.	This will reduce the amount of material going to grease traps and interceptors, which will require less frequent cleaning, reducing maintenance costs.	Observe dishwashing practices.
Dispose of food waste by recycling and/or solid waste removal.	Some recyclers will take food waste for animal feed. In the absence of such recyclers, the food waste can be disposed as solid waste in landfills by solid waste haulers.	Recycling of food wastes will reduce the cost of solid waste disposal. Solid waste disposal of food waste will reduce the frequency and cost of grease trap and interceptor cleaning.	Inspect grease traps and interceptors for food waste accumulation. Confirm the recycler or solid waste removal company with the establishment manager.

Properly Maintain Grease Traps and Interceptors to Prevent Introduction into the Sanitary Sewer System (part 1 of 2)

BMP	Reason For	Benefits to Food Service Establishment	Pretreatment Inspection Tips
Witness all grease trap or interceptor cleaning and maintenance activities to ensure the device is properly operating.	Grease trap/interceptor pumpers may take shortcuts. If the establishment manager inspects the cleaning operation and ensures it is consistent with the procedures in the section on *Grease Trap and Interceptor Maintenance* they are more assured of getting full value for their money.	The establishment will ensure it is getting value for the cost of cleaning the grease trap or interceptor.	Inspect maintenance log or service invoices to determine cleaning frequency.
Clean undersink grease traps weekly.	Undersink grease traps have less volume than grease interceptors. Weekly cleaning of undersink grease traps by the establishment's own maintenance staff will reduce the cost of cleaning the grease interceptor. If the establishment does not have a grease interceptor, the undersink grease trap is the only means of preventing grease from entering the sanitary sewer system. If the grease trap is not providing adequate protection, the local sewer agency may require installation of a grease interceptor.	This will extend the length of the cleaning cycle for grease interceptors that the establishment maintains.	Visually inspect the contents of the undersink grease trap. Inspect cleaning records. If grease traps are more than 50% full when cleaned weekly, the cleaning frequency needs to be increased.

Properly Maintain Grease Traps and Interceptors to Prevent Introduction into the Sanitary Sewer System (part 2 of 2)

BMP	Reason For	Benefits to Food Service Establishment	Pretreatment Inspection Tips
Clean grease interceptors routinely.	Grease interceptors must be cleaned routinely to ensure that grease accumulation does not cause the interceptor to operate poorly. The cleaning frequency is a function of the type of establishment, the size of the interceptor, and the volume of flow discharged by the establishment.	Routine cleaning will prevent plugging of the sewer line between the food service establishment and the sanitary sewer system. If the line plugs, the sewer line may back up into the establishment, and the business will need to hire someone to unplug it.	No more than 25% of the depth should be a combination of grease (top) and sediment (bottom).
Keep a *maintenance log.*	The maintenance log serves as a record of the frequency and volume of cleaning the interceptor. It is required by the pretreatment program to ensure that grease trap/interceptor maintenance is performed on a regular basis.	The maintenance log serves as a record of cleaning frequency and can help the establishment manager optimize cleaning frequency to reduce cost.	Inspect maintenance log. Provide the establishment with a sample maintenance log if it does not have one. Confirm the maintenance log with the grease hauler identified.

Prevent Fats, Oil, and Grease from Entering Creeks and Streams through the Storm Drain System (part 1 of 2)

BMP	Reason For	Benefits to Food Service Establishment	Pretreatment Inspection Tips
Cover outdoor grease and oil storage containers. Some local jurisdictions will have BMPs in place for stormwater also.	Uncovered grease and oil storage containers can collect rainwater. Since grease and oil float, the rainwater can cause an overflow onto the ground. Such an overflow will eventually reach the stormwater system and nearby streams.	The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams In addition, it is a violation of water quality regulations and might also result in legal penalties or fines.	Observe storage area for signs of oil and grease. Inspect containers for covers. Remove covers to ensure containers have not overflowed and do not have excess water.
Locate grease dumpsters and storage containers away from storm drain catch basins.	The farther away from the catch basin, the more time someone has to clean up spills or drainage prior to entering the storm drain system. Be aware of oil and grease dripped on the ground while carrying waste to the dumpster, as well as oil and grease that may "ooze" from the dumpster.	The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams. In addition, it is a violation of water quality regulations and might also result in legal penalties or fines.	Observe storage area for signs of oil and grease. Inspect the closest catch basin for signs of accumulated grease and oil.
Use absorbent pads or other material in the storm drain catch basins if grease dumpsters and containers must be located nearby. Do not use free flowing absorbent materials such as "kitty litter" or sawdust.	Absorbent pads and other materials can serve as an effective barrier to grease and oil entering the storm drain system.	The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams. In addition, it is a violation of water quality regulations and might also result in legal penalties or fines.	Check the nearest catch basin and drainage paths for signs of grease and oil. Require absorbent pads if the basin is within 20 feet of grease dumpsters or containers, or if there are signs of grease in the catch basin at any distance. Discourage the use of free flowing absorbent material such as "kitty litter."

Prevent Fats, Oil, and Grease from Entering Creeks and Streams through the Storm Drain System (part 2 of 2)

BMP	Reason For	Benefits to Food Service Establishment	Pretreatment Inspection Tips
Use absorbent pads or other material to clean up spilled material around outdoor equipment, containers or dumpsters. Free flowing absorbent materials such as "kitty litter" or sawdust may be used for minor “spot spills” as long as all material is swept up.	Absorbent pads or materials can help clean up grease and oil that is spilled on the ground and prevent it from flowing to the storm drain system.	The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams. In addition, it is a violation of water quality regulations and might also result in legal penalties or fines.	If grease and oil are observed on the ground in the storage area, recommend the use of absorbents to minimize movement of the grease and oil. Encourage the use of absorbent pads. Remind the personnel at the establishment that free flowing absorbent material, such as "kitty litter," should only be used for “spot spills.” No residual free flowing material should remain that might flow into storm drains.
Routinely clean kitchen exhaust system filters.	If grease and oil escape through the kitchen exhaust system, it can accumulate on the roof of the establishment and eventually enter the storm drain system when it rains.	The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams. In addition, it is a violation of water quality regulations and might also result in legal penalties or fines.	Inspect roof (if safely accessible) for signs of oil and grease. Require a maintenance schedule and records for cleaning exhaust filters. Cleaning is usually by washing, which will discharge the grease to the interceptor where it can be controlled.

Prohibitions Relating to Discharge of Fats, Oil, and Grease (part 1 of 1)

DO NOT…	Basis
Do not discharge fats, oil, and grease in concentrations that will cause an obstruction to the flow in a sewer, or pass through or interference at a wastewater treatment facility.	Grease can solidify and trap other solid particles to completely plug the wastewater collection system. Some jurisdictions have specific concentration limits.
Do not discharge grease, improperly shredded garbage, animal guts or tissues, paunch manure, bones, hide, hair, fleshings, or entrails.	These materials in combination or alone can cause blockages and other operations and maintenance problems in the wastewater collection and treatment system.
Do not discharge wastewater with temperatures in excess of 140° F to any grease traps. Mechanical dishwashers are not allowed to discharge to grease traps.	Temperatures in excess of 140° F will dissolve grease, but the grease can re-congeal and cause blockages further downstream in the sanitary sewer collection system as the water cools. Note: High temperature water, such as from a dishwasher, should be discharged to the remotely-located grease interceptor, if there is one. The remote location and the high volume of the interceptor allows the water time to cool so that there is not a problem with dissolving grease and moving it further downstream. The high volume also provides dilution of the detergents in the dishwasher waste.
Do not discharge waste from a food waste disposal unit to any grease traps. Discharging food waste disposal units to a grease interceptor may require the installation of a larger interceptor.	The food waste will greatly reduce the capacity of the grease trap for retaining grease and can cause worse problems with blockages.
Do not discharge caustics, acids, solvents, or other emulsifying agents.	Though emulsifying agents can dissolve solidified grease, the grease can re-congeal further downstream in the sanitary sewer collection system. Caustics, acids, and solvents can have other harmful effects on the wastewater treatment system and can be a hazard to employees working in the wastewater collection system.
Do not discharge fats, wax, grease or oils containing substances that will become viscous between 32° F (0° C) and 150° F (65° C).	The temperatures shown are temperatures that can occur in the wastewater collection and treatment system. If these substances congeal, solidify, or become too viscous, they can cause blockages and other operations and maintenance problems.
Do not utilize biological agents for grease remediation without permission from the sanitary agency receiving the waste.	The biological agents may disrupt the biological treatment process at the wastewater treatment plant.
Do not clean equipment outdoors in an area where water can flow to the gutter, storm drain, or street.	Grease and dirt will be washed off the equipment and enter the storm drain system and flow to nearby streams.

Grease Trap and Interceptor Maintenance

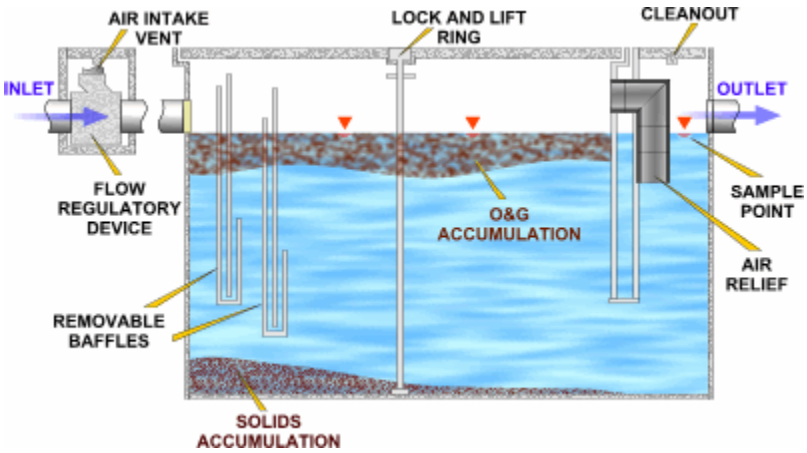
Grease trap maintenance is generally performed by maintenance staff, or other employees of the establishment. Grease interceptor (GI) maintenance, which is usually performed by permitted haulers or recyclers, consists of removing the entire volume (liquids and solids) from the GI and properly disposing of the material in accordance with all Federal, State, and/or local laws. When performed properly and at the appropriate frequency, grease interceptor and trap maintenance can greatly reduce the discharge of fats, oil, and grease (FOG) into the wastewater collection system.

The required maintenance frequency for grease interceptors and traps depends greatly on the amount of FOG a facility generates as well as any best management practices (BMPs) that the establishment implements to reduce the FOG discharged into its sanitary sewer system. In many cases, establishments that implement BMPs will realize financial benefit through a reduction in the frequency of required grease interceptor and trap maintenance. Refer to the "*Best Management Practices*" section for examples of BMPs that FOG generating establishments should implement.

WARNING! *Do not use hot water, acids, caustics, solvents, or emulsifying agents when cleaning grease traps and interceptors.*

Grease Trap Maintenance

A proper maintenance procedure for a grease trap is outlined below:



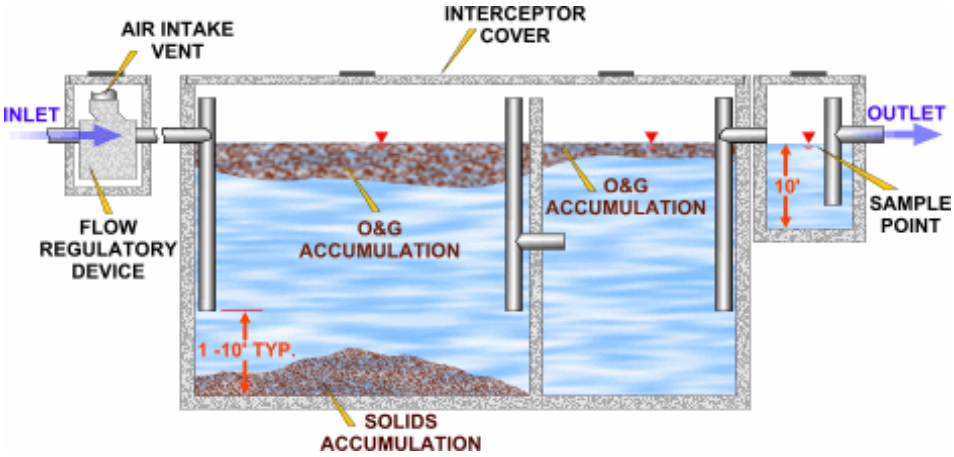
Step	Action
1.	Dip the accumulated grease out of the interceptor and deposit in a watertight container.
2.	Remove baffles if possible.
3.	Scrape the sides, the lid, and the baffles with a putty knife to remove as much of the grease as possible, and deposit the grease into a watertight container.
4	Remove solids from the bottom with a strainer or similar device.
5.	Replace the baffle and the lid.
6.	Record the volume of grease removed on the maintenance log.
7.	Contact a hauler or recycler for grease pick-up.

Grease Interceptor Maintenance

Grease interceptors, due to their size, need to be cleaned by grease haulers or recyclers.

A proper maintenance procedure for a grease interceptor is outlined below:

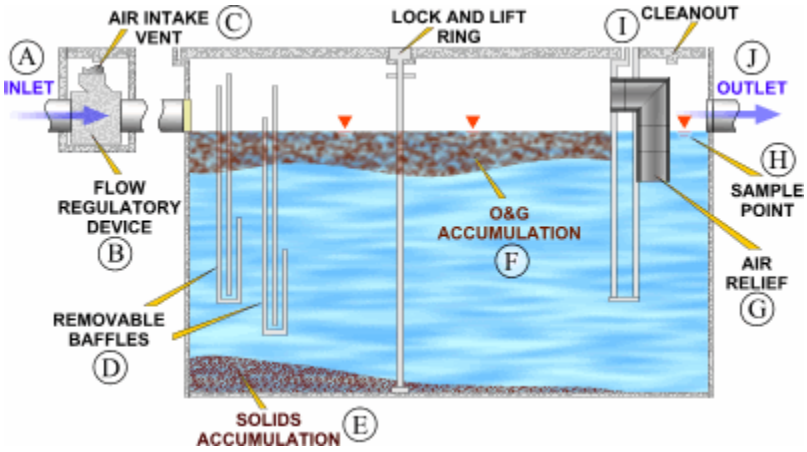
NOTE: Since the establishment is liable for the condition of their pretreatment devices, the establishment owners/representatives should witness all cleaning/maintenance activities to verify that the interceptor is being fully cleaned and properly maintained. (Note: UPC does not require a flow-regulating device. Check with the local jurisdiction to see if they will require a flow regulating device.)



Step	Action
1.	Contact a grease hauler or recycler for cleaning.
2.	Pump out the entire contents of the interceptor..
3.	Clean the sides, the lid, and the baffles to remove as much of the grease as possible.
4.	Replace the baffle and the lid.
5.	Record the volume of grease removed on the maintenance log.

How it Works

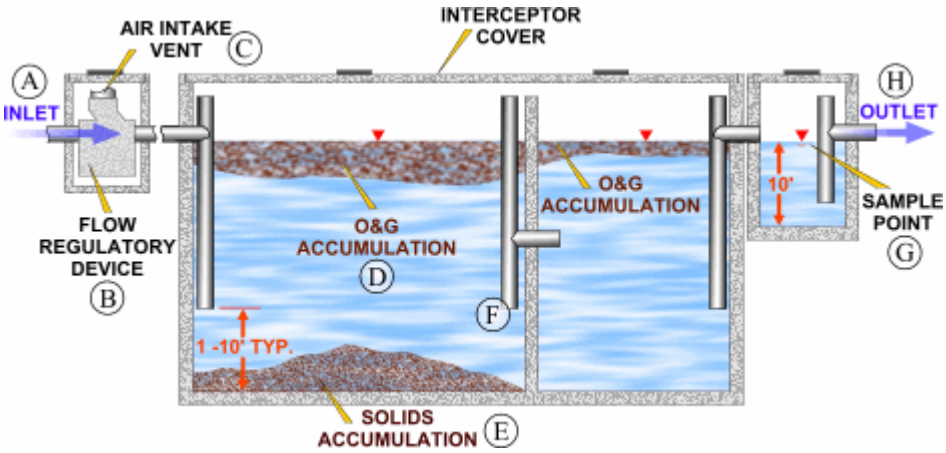
Grease Traps



A	Flow from four or fewer kitchen fixtures enters the grease trap.
B	An approved flow control or restricting device must be installed to restrict the flow to the grease trap to the rated capacity of the trap.
C	An air intake valve allows air into the open space of the grease trap to prevent siphonage and back-pressure.
D	The baffles help to retain grease toward the upstream end of the grease trap since grease floats and will generally not go under the baffle. This helps to prevent grease from leaving the grease trap and moving further downstream where it can cause blockage problems.
E	Solids in the wastewater that do not float will be deposited on the bottom of the grease trap and will need to be removed during routine grease trap cleaning.
F	Oil and grease floats on the water surface and accumulates behind the baffles. The oil and grease will be removed during routine grease trap cleaning.
G	Air relief is provided to maintain proper air circulation within the grease trap.
H	Some grease traps have a sample point at the outlet end of the trap to sample the quality of the grease trap effluent.
I	A cleanout is provided at the outlet or just downstream of the outlet to provide access into the pipe to remove any blockages.
J	The water exits the grease trap through the outlet pipe and continues on to the grease interceptor or to the sanitary sewer system.

How it Works

Grease Interceptors



A	Flow from undersink grease traps or directly from plumbing fixtures enters the grease interceptor. The UPC requires that all flow entering the interceptor must enter through the inlet pipe
B	Not required by UPC (Check with the local jurisdiction to see if a flow regulating device will be required).
C	An air intake valve allows air into the open space of the grease interceptor to prevent siphonage and back-pressure.
D	Oil and grease floats on the water surface and accumulates behind the grease retaining fittings and the wall separating the compartments. The oil and grease will be removed during routine grease interceptor cleaning.
E	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.
F	Grease retaining fittings extend down into the water to within 12 inches of the bottom of the interceptor. Because grease floats, it generally does not enter the fitting and is not carried into the next compartment. The fittings also extend above the water surface to provide air relief.
G	Some interceptors have a sample box so that inspectors or employees of the establishment can periodically take effluent samples. Having a sample box is recommended by the UPC but not required.
H	Flow exits the interceptor through the outlet pipe and continues on to the sanitary sewer system.

Compliance Checklists

Installation Checklist (part 1 of 3)

Number	Item Description	Compliance Status[1]
1.	Each grease trap serves not more than four single compartment sinks of the same depth. Grease trap is sized based upon the number of fixtures discharging to it. See FAQs.	
2.	Grease traps have a water seal of not less than two inches in depth or the diameter of its outlet, whichever is greater. (**Note:** Not specifically cited by UPC)	
3.	No food waste disposal unit or dishwasher is connected to or discharges into any grease trap.	
4.	Waste from toilets and urinals do not discharge to the grease interceptor.	
5.	Waste in excess of 140 degrees F is not discharged to any grease trap.	
6.	The vertical distance between the fixture outlets and grease trap weirs is as short as practical.	
7.	Grease interceptor is as close as practical to the fixtures served.	
8.	Each fixture connected to a grease trap is provided with an approved type flow control or restricting device installed in a readily accessible and visible location. Devices shall be designed so that the flow through the device or devices at no time exceeds the rated capacity of the grease trap or interceptor.	
9.	Each fixture discharging into a grease trap or interceptor is individually trapped and vented in an approved manner. The plumbing inspector should address this.	
10.	Each grease trap and interceptor is properly vented to allow air circulation throughout the entire drain system. The plumbing inspector should address this.	
11.	No water-jacketed grease trap or interceptor is installed.	
12.	Grease interceptor is easily accessible for inspection and cleaning and access does not require the use of ladders or the removal of bulky equipment.	
13.	There is a minimum of one access point into each compartment of the interceptor and no access points are greater than 10 feet apart. Each access opening is leak-resistant and cannot slide, rotate, or flip.	
14.	Location of grease interceptor is shown on approved building plans. Drawings of interceptor are complete and show all dimensions, capacities, reinforcing and structural design calculations.	

Installation Checklist (part 2 of 3)

Number	Item Description	Compliance Status[1]
15.	Grease interceptor is not installed in any part of a building where food is handled. Location shall meet the approval of the local jurisdiction.	
16.	Grease interceptor serves a single business establishment.	
17.	Grease interceptor has a minimum of two compartments and fittings designed for grease retention. The compartments shall be separated by partitions or baffles that extend at least 6 inches above the water level. The inlet compartment shall be 2/3 of the total interceptor capacity and shall have a minimum liquid volume of 333 gallons. The length of the inlet compartment shall be longer than the inside width of the interceptor.	
18.	The inlet and outlet fittings shall be a baffle tee (or similar flow device) that extends at least 4 inches above the water level to within 12 inches of the bottom of the interceptor. Flow between the separate compartments is through a baffle tee or bend that extends down to within 12 inches of the bottom of the interceptor.	
19.	The liquid depth shall be greater than or equal to 2’-6" and less than 6’-0".	
20.	There shall be a minimum of 9 inches of open vent space above the water level to the top of the interceptor. The airspace has a minimum capacity equal to 12-1/2% of the grease interceptor liquid volume.	
21.	The grease interceptor has at least one square foot of surface area for every 45 gallons of liquid capacity.	
22.	All waste enters the interceptor through the inlet pipe.	
23.	Grease interceptor cover is gas tight and has a minimum opening of 20 inches in diameter.	
24.	Grease interceptors located in areas of pedestrian or vehicle travel are adequately designed to support the imposed loads. Review of structural calculations may be required to verify adequacy.	
25.	Redwood baffles are not installed in grease interceptor.	
26.	A sample box is provided on the outlet side of the grease interceptor. This is recommended and may be required by the UPC so that the local jurisdiction can periodically sample the effluent quality.	
27.	Check to see if the grease interceptor is permanently and legibly marked with the manufacturer's name of trademark, model number, UPC certification mark and registration (if product is listed by the International Association of Plumbing and Mechanical Officials), and any other markings required by law.	

Installation Checklist (part 3 of 3)

Instructions for form:

1. Completely fill out general information.
2. For items that require some measurement of field data, the inspector should obtain the necessary data or information and record it under the column titled, "Field Data."
3. For all items marked in violation, note the fact that the establishment contact was notified of the violation and the contact's response.

[1]An entry should be made for each item using the following codes:

- "C" – Compliance with the item
- "V" – Violation of the item (provide explanation in the notes)
- "NA" – Not applicable (provide explanation in the notes)
- "NC" – Not checked (provide explanation in the notes)

Establishment: _____

Address: _____

Installed by: _____

Signatures: _____

Date: _____ _____

Notes: _____

_____

_____

_____

Inspection Checklist (part 1 of 2)

Number	Item Description	Field Data	Compliance Status[1]
1.	The establishment has implemented a training program to ensure that the BMPs are followed.		
2.	"No Grease" signs are posted in appropriate locations.		
3.	The establishment recycles waste cooking oil and can provide records of this.		
4.	Water temperatures at all sinks are less than 140°F. (Make special note of the pre-rinse sink before the mechanical dishwasher or the sinks in the three-sink system.) Measure and record temperature.		
5.	The establishment "dry wipes" pots, pans, and dishware prior to rinsing and washing.		
6.	Food waste is disposed of by recycling or solid waste removal and is not discharged to the grease traps or interceptors.		
7.	Grease trap(s) is cleaned regularly. Note and record the frequency of cleaning.		
8.	Grease trap cleaning frequency is documented on a *maintenance log* (obtain a copy of the document).		
9.	Grease interceptor does not contain greater than 25% the depth in grease or solids accumulation. Estimate and record amount of grease in interceptor.		
10.	Grease interceptor is cleaned and maintained regularly. Note and record frequency of cleaning.		
11.	Grease interceptor cleaning and maintenance frequency is documented on a *maintenance log* (obtain a copy of the document).		
12.	Outdoor grease and oil storage containers are covered and do not show signs of overflowing.		
13.	Grease and oil storage containers are protected from discharge to storm drains.		
14.	Absorbent pads (preferred) or other materials (e.g., “kitty litter”, etc.) are used to clean up any spills or leakages that could reach the storm drain. No residual free-flowing absorbent materials (e.g., “kitty litter”, etc.) should remain that might flow into storm drains.		
15.	Storm drain catch basins show no signs of grease or oil.		
16.	The roof shows no signs of grease and oil from the exhaust system.		
17.	Exhaust system filters are cleaned regularly, which is documented by cleaning records. Note and record frequency of cleaning.		

Inspection Checklist (part 2 of 2)

Instructions for completing the form:

1. Completely fill out general information.
2. For items that require some measurement of field data, the inspector should obtain the necessary data or information and record it under the column titled, "Field Data."
3. For all items marked in violation, note the fact that the establishment contact was notified of the violation and the contact's response.

[1]An entry should be made for each item using the following codes:

- "C" – Compliance with the item
- "V" – Violation of the item (provide explanation in the notes)
- "NA" – Not applicable (provide explanation in the notes)
- "NC" – Not checked (provide explanation in the notes)

Establishment: _____

Address: _____

Contact name: _____

Date: _____ _____

Inspector: _____

Contact info: _____

Time Inspection Started: _____

Time Inspection Completed: _____

Signatures: _____

Notes: _____

_____

_____

Appendix A: Grease Pretreatment Devices Contractor List.

The businesses listed below provide maintenance or installation of grease pretreatment devices. This list is not intended to be inclusive of all contractors available and is being provided as an example of contractors who, as of this printing, are available to provide these services. However any licensed and bonded contractor can also provide these services (check your local yellow page under Engineers-Mechanical, Food Facilities-Consultants, Plumbing, Restaurant Equipment and Tanks-Cleaning). This list represents businesses that have made themselves known to the City of Seattle Public Utilities. The City of Seattle Public Utilities and the Interagency Regulatory Analysis Committee (IRAC) make no recommendations regarding specific businesses that perform grease maintenance and removal.

The following companies provide grease pretreatment and removal devices.

NAME AND ADDRESS	INTERCEPTOR INSTALLATION	MAINTENANCE
Area Recyclers (Baker Commodities, Seattle Rendering) P.O. Box 58368 Seattle, WA 98138 206-243-4781 Contact: Mike Bulleri	no	yes
Auburn Mechanical P.O. Box 249 Aubu rn, WA 98071 253-838-9780 Contact: Kim Johnson	yes (grease traps only)	no
Best Plumbing 4129 Stone Way N. Seattle, WA 98103 206-633-1700 Contact: Patti Taylor	yes	no
Darling International 2041 Marc Av. P.O. Box 1716 Tacoma, WA 98401 1-253-377-1775 Contact: Mike Olson	no	yes
Drainage System Consultants P.O. Box 46876 Seattle, WA 98146 206-242-7280 Contact: Dennis Presteen	no	yes
D.J. Hopkins Co. Inc. 5617 236th Av. N.E. Redmond, WA 98053-2506 425-868-8600 Contact: N/A	yes	no
Evergreen Sanitation P.O. Box 259 Lake Stevens, WA 98258 1-800-433-1678 Contact: N/A	no	yes

NAME AND ADDRESS	INTERCEPTOR INSTALLATION	MAINTENANCE
Northwest Cascade/Flow Hawks P.O. Box 73399 Puyallup, WA 98373 1-800-562-4256 or 425-471-1555 Contact: John Parker	yes	yes (sell and install Nibbler system for on-site sewer systems).
Mechanical Agents 8230 5th Av S Seattle, WA 98108 206-464-1925 Contact: Gary Babb	yes	no
McKinstry Mechanical P.O. Box 24567 Seattle, WA 98124 206-818-1378 Contact: Tom Bagget	yes	yes
Mr. Rooter Plumbing 1120 S.W. 16th St. Ste. 1A Renton, WA 98055 206-763-9010 Contact: Vinnie Sposari	yes (traps only)	yes (plumbing only)
Northwest Cascade (multiple locations) 800-444-2371	yes	yes
O'Neill Plumbing 6056 California Av. S.W. Seattle, WA 98136 206-932-5283 Contact: N/A	yes	yes
Roto-Rooter Plumbing 20508 56th Av. W. Suite C Lynnwood, WA 98036 206-633-5506 Contact: Robin French	yes	yes
Rescue Rooter P.O. Box 719 Kent, WA 98035 1-800-869-6980	yes	yes (jetting and plumbing only - no pumping)
University Mechanical 11611 49th Pl W. Mukilteo, WA 98275 206-364-9900 Contact: N/A	yes	yes

Note: It is prudent to obtain at least three bids. This is a competitive field and it is often possible to realize substantial savings by soliciting competitive bids. Once you have chosen a contractor be sure and obtain the necessary permits to do the work you desire. If you or your contractor have any problems, be sure and contact your city's grease management program for more information.

Appendix B: Grease Management Service Provider Contractor List.

The businesses listed below provide grease pick up, delivery to and in some cases rendering of restaurant grease for disposal. This list is not intended to be inclusive of all contractors available and is being provided as an example of contractors who, as of this printing, are available to provide these services. However any licensed and bonded contractor can also provide these services (check your local yellow pages). This list represents businesses that have made themselves known to the City of Seattle Public Utilities. The City of Seattle Public Utilities and the Interagency Regulatory Analysis Committee (IRAC) make no recommendations regarding specific businesses that perform grease management services.

The following companies offer different types of food and grease recycling services. ***NOTE: They may require relatively large volumes to justify pickup.***

NAME AND ADDRESS

Area Recyclers Inc.
(Baker Commodities, Seattle Rendering)
P.O. Box 58368
Seattle, WA 98138
206-243-4781 Contact: Mike Bulleri or Fred Roberts

Darling Restaurant Services
2041 Marc Av.
P.O. Box 1716
Tacoma, WA 98401
253-572-3922 Contact: Mike Olson

Pacific Rendering Co. Inc.
4023 West Marginal Way S.
Seattle, WA 98106
206-938-2061 Contact: Jim Johnstone

Rainier Ranch, Inc.
P.O. Box 301
Seahurst, WA 98062
206-243-2044 Contact: Roxann Wydick

Note: It is prudent to obtain at least three bids. This is a competitive field and it is often possible to realize substantial savings by soliciting competitive bids. Once you have chosen a contractor be sure and obtain the necessary permits to do the work you desire. If you or your contractor have any problems be sure and contact your cities grease management program for more information.

Appendix C: References.

- Brown and Caldwell – Fats, Oils, and Grease BMP Manual (http://www.oracwa.org)
- King County Public Rules and Regulations PUT 8-13 (PR)
- Washington Department of Labor and Industries, Washington Industrial Safety and Health, Washington Administrative Code (WAC 296-62 & 296-64)
- King County Code (KCC 28.84.060.)
- Revised Code of Washington (RCW Title 35.58.)
- Clean Water Act (33 U.S.C. 1251 et seq.).
- General Pretreatment Regulations (40 CFR 403).
- Uniform Plumbing Code