City of South Burlington Division of Water Pollution Control

Fats, Oil and Grease

I. Introduction

Fats, oil and grease in the sewer system is the source of many sewer line blockages and sewer overflows in South Burlington. Many man and equipment hours are dedicated to unclogging these lines. Animal and vegetable-based oil and grease most often enter the sewer system in their melted form. In the sewer system these fats and oil cool and solidify. This solidified grease collects on the walls of the sewer line resulting in reduced capacity, line blockages and sanitary sewer overflows.

Sewer overflow are a very serious matter. These overflow events discharge raw untreated sewage onto public and private properties and into our local streams and rivers. Nation wide, 30 to 35 % of all sewer overflows is caused by fats, oil and grease blockages. In an effort to resolve this problem, the City of South Burlington has developed a grease control program.

The program will combat the grease problem through regulation, education, inspections and enforcement. In April of 2001 the south Burlington city council adopted an ordinance amendment regarding the use of grease, oil, and sand separators by city businesses.

During the last year, the city has experienced multiple back-ups of sanitary sewage into private homes caused by a build-up of grease in the sewer mains. While the existing ordinance required your business to have a grease trap, the amendment establishes permitting and enforcement procedures to go into effect December 1, 2001.

II. Grease Interceptor Requirements:

Permitting

- The application should be sent to Ray Belair, Code Enforcement Officer, 575 Dorset Street, South Burlington , Vermont 05403
- There is no permit fee.
- You may include multiple grease traps on one permit provided all appropriate plans are supplied.

- The permit issued by the city will not expire. However, if you make changes to an existing grease trap or install a new one, a new permit will be required.

Proper Sizing

In order to perform correctly, grease interceptors must be adequately sized. The City of South Burlington requires that all grease interceptors provide a minimum of 12 minutes retention time at theoretical peak flow rate. The following chart can be used to calculate the theoretical peak flow rate based on fixtures connected to the interceptor.

Peak flow rate values by fixture type	
Fixture Unit	**Peak flow Rate (Gallons/Minute)**
Hand Sink	7.5
Restaurant Kitchen sink	15
Single Compartment Scullery Sink	20
Double Compartment Sink	25
Triple Compartment Sink	30
Two single Compartment Sinks	25
Two Double Compartment Sinks	30
Floor Drain	5
Dishwasher	Manufacturer's Peak Discharge Rate

Exceptions to minimum sizing requirements

Some facilities may be granted exemption from minimum sizing requirements if they can demonstrate that space restrictions preclude the installation of a properly sized interceptor. In extreme situations, financial hardship may be considered as a course for exemption. In evaluation of financial hardship situations, the Division of Water Pollution control will consider the installation costs verses the grease removal benefit and weather or not other suitable options are available. The final decision will be made by the city.

Design Requirements

Grease interceptors shall be constructed of constructed of impervious material capable of withstanding extreme changes in temperature, shall

be of substantial construction, watertight and equipped with easily removable covers. The interceptor shall contain a baffle system, which adequately diverts and slows the flow to avoid short-circuiting. Interceptors located in parking lots should be traffic rated.

Maintenance

Grease interceptors should be cleaned on a regular basis to ensure efficient operation. The necessary frequencies of cleaning will vary depending on the nature of the facility. Factors that may affect cleaning frequency types of food, cooking methods, cleaning techniques, carry-out verses dine-in, and all will determine the volume of grease discharged. Facilities with high grease loadings may need to clean their interceptors as often as monthly. Facilities with undersized interceptors, especially under- the-counter units, should clean their interceptors weekly or even daily.

To properly clean a grease interceptor, the entire contents (liquid and solid) need to be pumped out. Leaving accumulated solids in the bottom of grease interceptors can lead to short-circuiting and reduce retention times, as well as, producing unpleasant odors.

Maintenance of external large grease interceptors should be performed by qualified grease or septic haulers. These services will empty the entire contents with a pumper truck and haul the grease to an approved site. The following is a list of haulers with an agreement with the Division of Water Pollution Control, South Burlington.

Haulers listed in alphabetical order	Phone
Bundy's sewer & Drain Service Inc.	862-2245
Hartigan Co.	800-696-0761
P & H Senesac, Inc.	863-6322
P & P Septic Service, Inc.	658-6243

Record Keeping

Maintenance and cleaning records may be kept in any form you wish and kept on file on site. Receipts or manifests from private pumping septic and grease haulers should indicate destination of hauled material. The records shall be made available to South Burlington inspectors upon request. Maintenance records should contain the following information.

- Date of Maintenance
- Item Removed
- Approximate amount removed
- Disposal Location
- Authorized Signature or initials for verification

A copy of the grease interceptor permit issued by the City of South Burlington shall be kept on file at the facility the permit has been issued to.

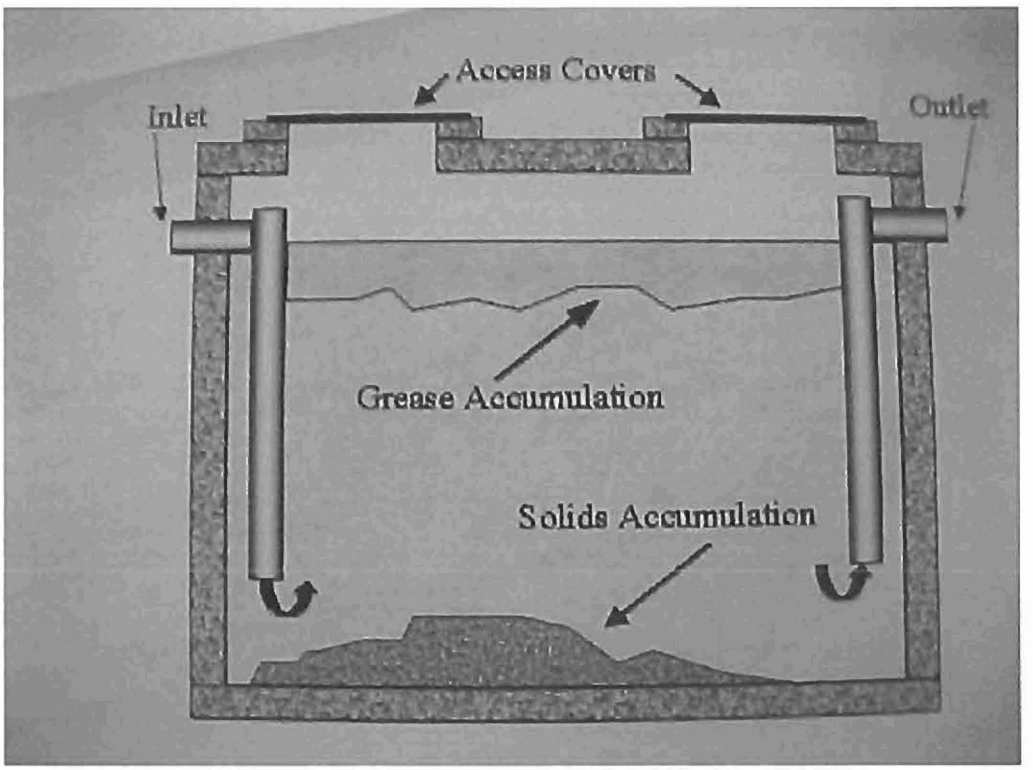
Proper placement of Internal Grease Traps

The placement of internal grease traps is the key solution to grease removal. The largest point source of grease to the sewer system is through the dish cleaning area, especially the pre-rinse cycle before the dishwasher. If a facility uses a three compartment sink for dish and cookware cleaning, then the three compartment sink would be the best place for the grease trap. Some facilities with multiple sources of grease may need to install more than one grease trap. Food disposals should not be connected to the grease trap or interceptor.

III. How does a Grease Interceptor Or Trap Work

A grease interceptor or trap is a device designed to slow the flow of grease-laden waters to allow for gravity separation. The unit contains a baffle system, which redirects and slows the flow of water. Good separation requires a minimum of 12 minutes detention time, based on the peak flow rate. Water entering the unit takes 12 minutes to exit the unit. This is enough time to allow for the majority of grease to float and be trapped in the baffle system, and for the solids to settle to the bottom of the unit.

Sample Grease Interceptor



IV. Best Management Practices

Fats, oil and grease can be managed effectively in the food service industry to minimize the discharge of grease to the sewer system and decrease the required maintenance of grease interceptors. By preventing them from entering the waste system you reduce the burden on the grease interceptor and then reducing maintenance time, costs and disposal fees.

Train Kitchen Staff:

Train Kitchen staff in management practices and methods to reduce the volume of grease discharged to the sanitary sewer system. Train personal to be aware of problems created by grease in the sewer system, possible violations, fines and cost of cleaning clogged pipes. Even the smallest amount of grease on each pot, pan, or plate can be substantial when you serve hundreds of meals per day.

- Post " NO GREASE" Signs
- Dry Wipe Pots Pans and Dishware Prior to Dishwashing
- Do Not Dispose of Waste Food Through a Garbage Disposal
- Clean Grease Interceptor Routinely and Keep Records
- Witness Cleaning and Maintenance Procedures
- Inspect the Grease Interceptor During Maintenance

Enforcement

The amendment (Section 4) establishes enforcement procedures. The city code enforcement officer, and other designated city officials, will be able to write citations for the penalties indicated if your business is found to be in violation of the ordinance.

Attached is a sample maintenance log and also a copy of the ordnance.

CITY OF SOUTH BURLINGTON
GREASE, OIL, AND SAND REMOVAL FORM

Business Name: _____

Business Address: _____

DATE	Item Removed	Approx. Amount	Removed By	Disposal	Authorized By