

December 6, 2004

**Honorable Mayor and Members of the  
Hermosa Beach City Council**

**Regular Meeting of  
December 14, 2004**

SUBJECT: AMENDMENT TO THE CITY'S PLUMBING CODE REQUIRING THE INSTALLATION OF GREASE REMOVAL SYSTEMS FOR EXISTING FOOD SERVICE ESTABLISHMENTS.

**Recommendation:**

That the City Council:

1. Review and comment on the attached ordinance requiring the installation of grease removal systems in existing restaurants and other food service establishments.
2. Direct staff to schedule informational meetings with the business community on the proposed requirements for grease traps and interceptors.
3. Schedule the matter for City Council hearing in March 2005.

**Background:**

On July 27, 2004, the City Council adopted a City Work program for fiscal year 04-05. One of the elements of that program was the adoption of a requirement to remove grease from wastewater discharged to the municipal sewer by restaurants and other food service establishments.

As noted in the findings section of the attached draft ordinance, cooking grease produced by restaurants and other businesses discharged into the City's sewer system can cause sewer line blockages, which in turn create a number of problems, such as the following:

- Sewer backups and overflows, which are offensive and a threat to public health;
- Discharge of backed-up sewage into storm drains, which degrades water quality in water courses and the ocean;
- The need for repeated and costly unclogging of sewer lines by the City;
- Breakage and reduced sewer life creating additional costs for the City and sewer users.
- Excessive grease sent to the wastewater treatment facility can overload the system and cause the facility to exceed its allowable discharge limits.

The City spent \$111,500 in sewer cleaning for FY 03-04. This included cleaning sewers in the downtown area four times because of heavy grease buildup. During this same year the City experience three sewer overflows, two of which were caused by grease plugging the sewer lines. Typically the back up occurs in residential areas. The City typically spends between \$3,000 - \$5,000 on clean-up costs per occurrence plus damages for a total of between \$6,000 - \$10,000.

The attached draft ordinance is aimed at adding grease removal systems to existing food service establishments to remove grease generated before it enters the sewer system. Several other cities, which use this approach, report that it is quite effective in reducing grease in the sewer system and reducing the occurrence of blockages and sewer overflows. It also serves to extend the life of the sewer lines and therefore the long-term cost to the users.

The requirement for the installation of grease removal systems is to be applied to all existing affected establishments. It is the same requirement as presently imposed upon any new restaurant.

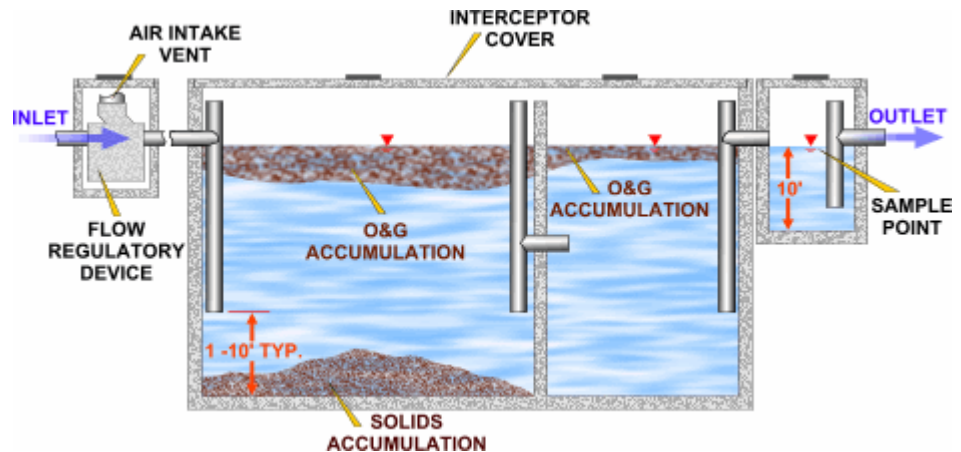
**Analysis:**

Grease removal systems address the problems identified above by capturing the oil and grease from the flow of wastewater through the grease trap and allowing it to cool. As it cools, the grease and oil separate out of the water and float to the top of the trap. The cooler water continues to flow down the drain pipe to the sewer, while baffles prevent the accumulated grease and oil from flowing out of the system.

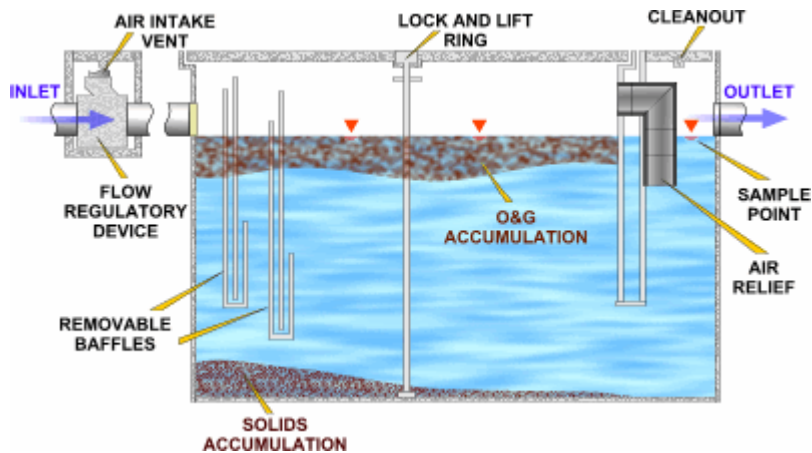
The Ordinance provides three options for grease recovery prior to entering the sewer system:

1. *Grease Interceptor* – All affected establishments that discharge wastewater in excess of 140° F (e.g. from dishwashers) or which have five or more kitchen-related fixtures (sinks, dishwashers, etc.) draining into the sewer system shall have these and all other appliances or fixtures which may discharge grease connected to a properly installed and approved grease interceptor. This is a large capacity tank installed outside the building, usually under the public sidewalk, parking lot or alley. Grease interceptors are used to treat drain flows of over 55 gallons per minute.
2. *Grease Trap* – Establishments that discharge wastewater at less than 140° F and which have less than five kitchen-related fixtures are required to install a grease trap or. A grease trap is a much smaller tank than an interceptor and is usually installed under the floor of the restaurant's kitchen or scullery. Grease traps may treat drain flows generally below 55 gallons per minute or less.
3. *Automatic Grease Recovery System* – A newer alternative to grease traps is an automatic grease recovery system (AGRS). These systems can be located under sinks or in basements or equipment rooms. They can treat drain flows from 20 up to about 100 gallons per minute.

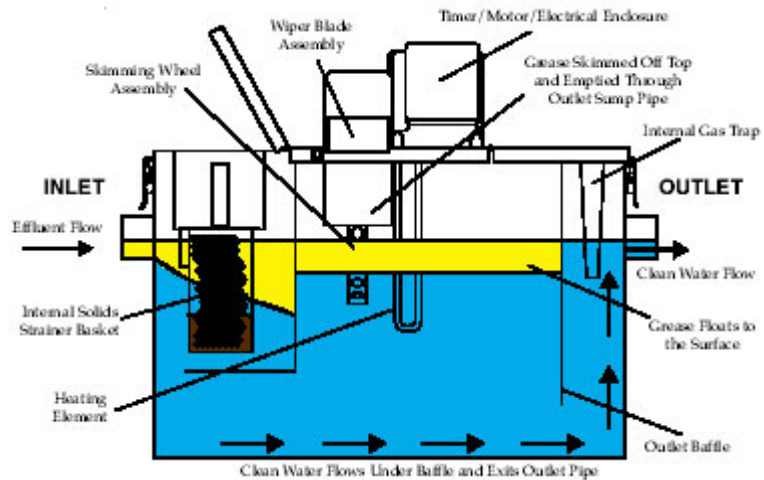
**Grease Interceptor:  
Over 55 gpm**



**Grease Trap:  
20-55 gpm (up to 75  
gpm under certain  
conditions)**



**Automatic Grease Recovery Systems:  
20-100 gpm**



Grease traps are small tanks located in or below the floor of the kitchen or scullery. Grease interceptors are larger than grease traps and, unlike traps, are usually located underground outside of the building. Both systems work by flotation and sedimentation. The waste stream of hot greasy water is slowed down by the inlet flow control and allowed to cool within the first compartment. As the hot water cools, the grease and oil separate and float to the top of the compartment. Larger, heavier food particles and grit, like coffee grounds sink to the bottom of the compartment. The cooler water continues to flow into the second and subsequent compartments repeating the flotation and sedimentation process until the cooled waste stream flow out of the trap and down the pipe to the sewer.

For automatic grease recovery systems, free-floating grease and oils are trapped in a baffled chamber like a traditional grease trap/interceptor. However, unlike traditional grease trap/interceptors, automatic recovery systems use a skimming wheel (which is usually controlled by a timer) to skim the grease and oils out of the baffled chamber. The grease and oils are scrubbed off of the wheel with a wiper blade and pumped out of the unit and into a collection container provided with the system.

The approximate cost of the three types of systems are: \$4,000 for a trap; \$15,000 for an interceptor and \$3,800 for an AGRS. The total cost is dependent upon the number of fixtures and the method of installation due to fixture layout. Costs to prepare plans, when necessary, and for permits are not included in the above estimates. The pros and cons of the systems are:

1. *Grease Interceptors:*
  - Pros: Large capacity and highly effective for large food service operations.
  - Cons: Expensive; requires excavation and disruption to parking lots, sidewalks, etc. Requires frequent cleaning and maintenance.
2. *Grease Traps:*
  - Pros: Relatively inexpensive; easy indoor access.
  - Cons: Limited capacity; requires excavation of floor of kitchen or scullery. Requires frequent cleaning and maintenance.
3. *AGRS:*
  - Pros: Not as expensive as grease interceptors; easy indoor access; can be placed under sinks without excavation; requires less cleaning and maintenance than other systems; easier to operate.
  - Cons: Limited capacity; requires electrical power to pump wastewater.

The draft ordinance provides flexibility for installation of one or a combination of the required systems. An owner may use the less expensive AGRS and/or grease traps even when there are five or more fixtures in the establishment when it can be demonstrated that the overall flow rate for all fixtures is below 75 GPM.

Further, staff suggests phasing the regulations for traps and interceptors and allowing time for compliance and the waiver of permit fees for all businesses that comply with the regulations with specified timeframes. The time limits for compliance with the Ordinance are as follows:

1. All affected establishments existing on the effective date of the Ordinance requiring a grease trap or automatic grease removal system shall have such system installed within 180 days after the date of adoption.
2. All affected establishments existing on the effective date of the Ordinance requiring a grease interceptor shall have such grease interceptor installed within 360 days after the date of adoption.

Individual dwelling units and private living quarters are exempt from the requirements of the Ordinance. In addition, food preparation and food service establishments may be exempted from the requirements of the Ordinance if it is determined that the establishment does not qualify as an "affected establishment".

Any owner of an affected establishment may file an appeal to the provisions of the Ordinance or any enforcement or other actions by City staff with the Board of Appeals. Appeals are to be filed with the Director of Community Development within 15 days of the action being appealed or, in the case of the required installation of grease removal systems, prior to the deadline date for such installation. The filing of an appeal will stay further action under the Ordinance until the appeal has been acted on. Requests for time extensions of up to 90 days, based on grounds of financial hardship, will be heard by the City Council.

The Ordinance also provides for annual inspections of grease removal systems in order to ensure proper maintenance and functioning and an annual inspection fee of \$225. The fee will be collected with the business license and cover costs for inspection by outside inspectors. The owner must supply annual maintenance records from haulers manifests during inspections.

Under the Ordinance, the City is required to provide written notice to all affected establishments, notifying each of the adoption of the Ordinance, its requirements, and the time limits for compliance. Staff is suggesting that, prior to adopting the Ordinance, several public information meetings be conducted with area businesses to provide details about the proposed requirements and answer questions. An example of the public information proposed for distribution is attached.

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Sol Blumenfeld, Director  
Community Development Department

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Rick Morgan, Director  
Public Works Department

Concur:

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Stephen R. Burrell,  
City Manager

Attachments:

1. Ordinance Amending Municipal Code
2. Public Information Transmittal

\\Hermosa\vol1\B95\CD\LarryL\Grease Trap Regulations\Grease Traps - CC Staff Report and Ord - revised 12-6.doc

**ORDINANCE 04-**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF HERMOSA BEACH, CALIFORNIA AMENDING CHAPTER 15.16 OF THE PLUMBING CODE, BY ADDING SECTION 15.16.070 TO REQUIRE THE RETROFITTING OF GREASE REMOVAL SYSTEMS FOR FOOD SERVICE ESTABLISHMENTS**

The City Council of the City of Hermosa Beach does hereby ordain as follows:

**Section 1 - Findings.** The City Council hereby finds as follows:

1. Cooking grease produced by restaurants and other businesses discharged into the City's sewer system can cause sewer line blockages, which in turn create a number of problems, such as the following:
  - Sewer backups and overflows, which are offensive and a threat to public health;
  - Discharge of backed-up sewage into storm drains, which degrades water quality in water courses and the ocean;
  - The need for repeated and costly unclogging of sewer lines by the City;
  - Breakage and reduced life of sewer lines, creating additional costs for the City and sewer users.
  - Excessive grease sent to the wastewater treatment facility, which can overload the system and cause the facility to exceed its allowable discharge limits.
2. Grease recovery systems address the foregoing problems by capturing the oil and grease from the flow of wastewater by the action of slowing down the flow of hot greasy water through the grease trap and allowing it to cool. As it cools, the grease and oil separate out of the water and float to the top of the trap. The cooler water continues to flow down the drain pipe to the sewer, while baffles prevent the accumulated grease and oil from flowing out of the grease trap.

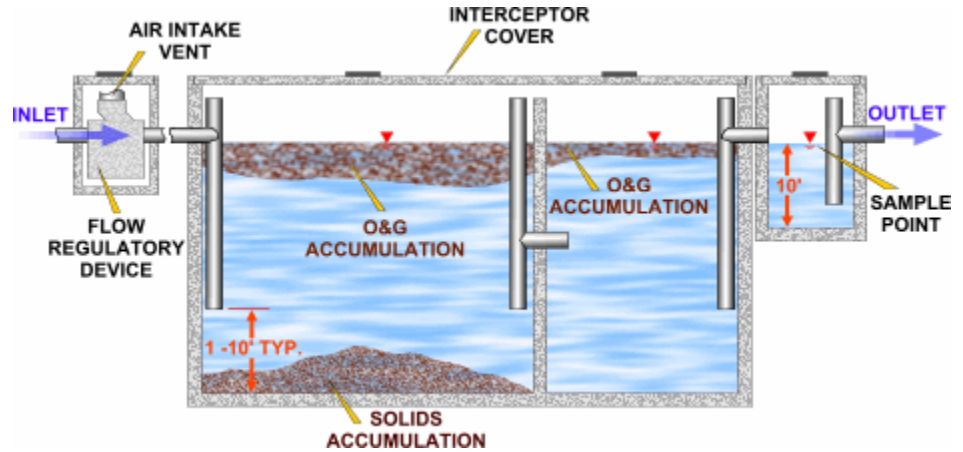
**Section 2 - Public Hearing.** The City Council held a duly-noticed public hearing on ... to take testimony regarding the grease collection issue and to consider the provisions of this Ordinance.

**Section 3 - Grease Recovery System Required.** Based on the foregoing findings, evidence presented, and the testimony and written communications considered at the public hearing, the City Council hereby ordains that the retrofit installation of grease recovery systems shall be required for all affected establishments as follows:

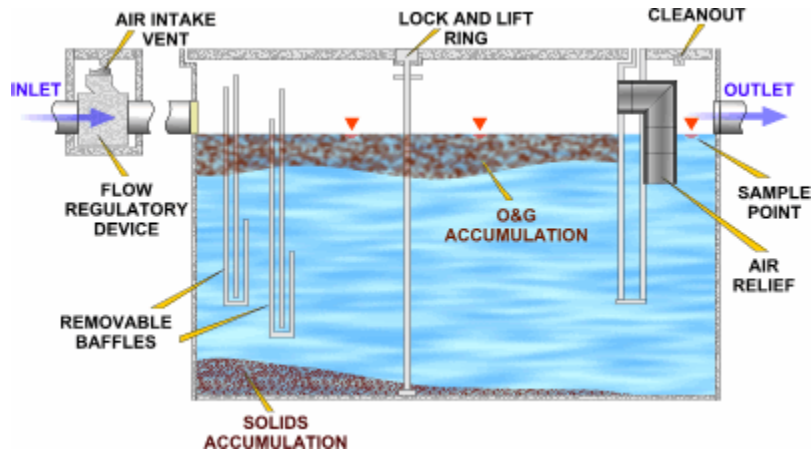
1. *Grease Interceptors Required.* All affected establishments which utilize food waste disposal units, dishwashers, or fixtures or appliances that discharge wastewater in excess of 140° F or which have five or more kitchen-related fixtures (sinks, dishwashers, etc.) draining into the sewer system shall have these and all other appliances or fixtures which may discharge grease connected to a properly installed and approved grease interceptor. The grease interceptors shall be installed and sized as required by Appendix Chapter H of the 2000 edition of the Uniform Plumbing Code. An effluent sampling box shall be provided on the discharge side of all grease interceptors (an accessible sampling cleanout installed on the discharge fitting and extending to within 12 inches of the bottom of the manhole access cover shall be excepted as an equivalent to a sampling box).
2. *Grease Traps or AGRS Required.* Affected establishments which do not utilize food waste disposal units, dishwashers, or fixtures or appliances that discharge wastewater in excess of 140° F and which have less than five kitchen-related fixtures (sinks, dishwashers, etc.) draining into the sewer system shall protect all appliances or fixtures which may discharge grease to either a grease interceptor or grease trap(s) as permitted by Section 1011.1 of the Uniform Plumbing Code, or to a City-approved automatic grease recovery system (AGRS). Such systems, along with their required flow control fittings, shall be installed in accessible locations and sized as required by Table 10-2 of the UPC. Sample illustrations of grease removal systems are shown on the next page.
3. *Options for System Installation.* When it can be demonstrated that the total flow of effluent is not greater than 75 GPM, the affected establishment shall have the option to install any of the required grease recovery systems separately or in combination, regardless of the number of total fixtures. Under no conditions however, shall the affected establishment be permitted to install other than an interceptor when the temperature of wash water exceeds 140 degrees.
4. *Installation.* Grease removal systems shall be installed in the drain line leading from sinks, drains, floor sinks and other fixtures or equipment in order to pretreat discharge before entry into the public sewer system. Installations shall be in full compliance with all codes and ordinances of the City and their manufactures installation instructions. The manufacturers installation and maintenance instruction shall be provided to the City for approval. Plans for grease removal systems shall be prepared

by a licensed professional engineer or a licensed plumbing contractor. Plans shall be submitted to the Community Development Department (CDD) and shall be reviewed by that Department and the Public Works Department. Upon approval, a plumbing permit, shall be issued by the Community Development Department. Any approvals and permits required for work in the public right-of-way shall be obtained from the Public Works Department.

**Grease Interceptor:**



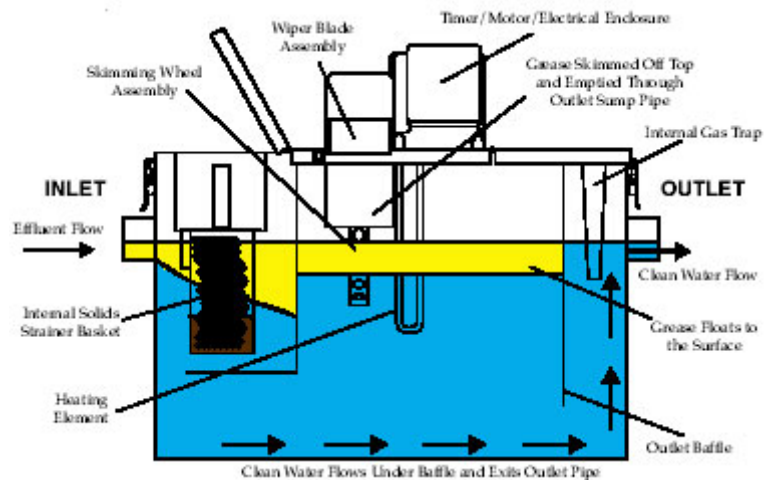
**Grease Trap:**



Grease traps are small tanks located in or below the floor of the kitchen or scullery. Grease interceptors are larger than grease traps and, unlike traps, are usually located underground outside of the building. Both systems work by flotation and sedimentation. The waste stream of hot greasy water is slowed down by the inlet flow control and allowed to cool within the first compartment. As the hot water cools, the grease and oil separate and float to the top of the compartment. Larger, heavier food particles and grit, like coffee grounds sink to the bottom of the compartment. The cooler water continues to flow into the second and subsequent compartments repeating the flotation and sedimentation process until the cooled waste stream flow out of the trap and down the pipe to the sewer.



## Automatic Grease Recovery Systems:



For automatic grease recovery systems, free-floating grease and oils are trapped in a baffled chamber like a traditional grease trap/interceptor. However, unlike traditional grease trap/interceptors, automatic recovery systems use a skimming wheel (which is usually controlled by a timer) to skim the grease and oils out of the baffled chamber. The grease and oils are scrubbed off of the wheel with a wiper blade and channeled out of the unit and into a collection container provided with the system.

4. *Maintenance.* It is the responsibility of the owner or operator of the affected establishment to maintain grease removal systems in a sanitary, safe, and efficient operating condition so as to prevent grease from being carried into the sewer system. A grease removal system shall not be considered properly maintained if for any reason it is not in good working condition or if sediment and/or grease accumulations total more than 25 percent of the operative fluid capacity. It is the owner or operator's responsibility to provide for removal of the accumulated grease and other waste contained in the system. Grease removed from such a system shall not be disposed of in sanitary sewer or storm sewer.
4. *Inspection.* All owners/operators shall keep annual maintenance records and haulers manifests and shall allow City inspection of grease removal systems a minimum of once per calendar year. All applicable records shall be available to the Director or his representative upon request or during annual inspection. An annual inspection fee of \$225 shall be paid by the owner/operator at the time of business license renewal.

**Section 4 - Compliance Schedule.** The time limits for compliance with this Ordinance shall be as follows:

1. All affected establishments existing on the effective date of this Ordinance requiring a grease trap or automatic grease removal system under the provisions contained herein

shall have such a system installed within 180 days after the date of adoption of this Ordinance.

2. All affected establishments existing on the effective date of this Ordinance requiring a grease interceptor under the provisions contained herein shall have such grease interceptor installed within 360 days after the date of adoption of this Ordinance.

**Section 5 - Exemptions.** Individual dwelling units and private living quarters are not subject to the requirements of this Ordinance. In addition, food preparation and food service establishments may be exempted from the requirements of this Ordinance if it is determined by the the Director that the establishment's discharges will not exceed those identified in the definition of "affected establishment" herein.

**Section 6 - Notice from City.** The City shall provide written notice to all affected establishments notifying each of the adoption of this Ordinance, the requirements herein, and the schedule for compliance.

**Section 7 - Enforcement and Appeals.**

A. Enforcement. Violations of this Ordinance may result in fines and/or penalties. Failure to comply with the provisions of this Ordinance may result in one or more of the following:

1. Notices of non-compliance may be issued with a specified period for correction.
2. A misdemeanor complaint may be filed in accordance with the Municipal Code.
3. Sewer service may be disconnected as described in section 17.16.060 of the Municipal Code.

B. Appeals. Appeals to the provisions of this Ordinance may be filed as follows:

1. An owner of an affected establishment may file an appeal of its classification as an "affected establishment" or of any of the preceding enforcement or other actions by City staff with the Board of Appeals.
2. Appeals shall be in writing, including specific grounds for the appeal, and shall be filed with the Director of Community Development. Appeals shall be filed within 15 days of the action being appealed or, in the case of the required installation of grease traps or interceptors, prior to the deadline date for such

installation. The filing of an appeal shall stay further action under this Ordinance until the appeal has been acted on.

**Section 8 - Requests for Time Extensions.** An owner of an affected establishment may request that the City Council grant a time extension of up to 90 days beyond the required grease trap or interceptor installation deadline. Grounds for such a time extension shall be limited to financial hardship only. Requests shall be in writing, including the specific financial hardship, and shall be filed with the Director of Community Development prior to the deadline date for installation. The filing of such a request shall stay further action under this Ordinance until the appeal has been acted on. The City Council may grant such a time extension of up to 90 days if it finds that an owner will suffer undue financial hardship by complying with the installation deadline.

**Section 9 - Definitions.** For the purposes of this Ordinance, the following terms shall have the following meanings:

- *Affected establishment* means all commercial and institutional food preparation and food service facilities which discharge wastewater or materials containing fat, oil or grease of a concentration exceeding 100 mg/l, whether emulsified or not, or containing substances which may solidify or become viscous at temperatures between 0 and 65 degrees Celsius (32-150 degrees F) at an access in nearest proximity to the point of discharge into the wastewater treatment system, generally including but not limited to bakeries, boardinghouses, fraternities, sororities, assisted living facilities, convalescent homes, butcher shops, cafes, clubhouses, commercial kitchens, delicatessens, fat rendering plants, ice cream parlors, hospitals, hotels, meat packing plants, restaurants, churches and other religious institutions with kitchen facilities, car washes, schools, slaughterhouses, soap factories, takeout shops, shopping centers with food processing facilities, and similar facilities, especially where meat, poultry, seafood, dairy products or fried foods are prepared or served.
- *Director* shall mean the Community Development Director or his designee.
- *Grease* shall mean grease, or fatty or oily substances and other insoluble waste that turns or may turn viscous or solidifies with a change in temperature or other conditions.
- *Grease trap* means a separation device that has a flow rate of 55-gallons per minute (gpm) or less.

- *Grease interceptor* means a separation device that has a flow rate greater than 55-gpm or is connected to five or more fixtures.
- *Grease removal system* means any system which functions to remove grease prior to from drain water prior to its entry into the public sewer system.

**Section 10 - Environmental Review.** This Ordinance is not subject to environmental review under the California Environmental Quality Act (CEQA) Statute and Guidelines, because it is not a project under CEQA, per Section 15378 of the Guidelines.

**Section 11 - Effective Date.** This ordinance shall become effective and be in full force and effect from and after thirty (30) days of its final passage and adoption.

**Section 12 - Publishing of Ordinance.** Prior to the expiration of fifteen (15) days after the date of its adoption, the City Clerk shall cause this ordinance to be published in the "Easy Reader", a weekly newspaper of general circulation published and circulated in the City of Hermosa Beach, in the manner provided by law.

**Section 13 - Certification of Ordinance.** The City Clerk shall certify to the passage and adoption of this ordinance, shall enter the same in the book of original ordinances of said city, and shall make minutes of the passage and adoption thereof in the records of the proceedings of the City Council at which the same is passed and adopted.

**PASSED, APPROVED and ADOPTED** this \_\_\_\_\_ day of March, 2005, by the following vote:

AYES:  
 NOES:  
 ABSTAIN:  
 ABSENT:

\_\_\_\_\_  
 PRESIDENT of the City Council and MAYOR of the City of Hermosa Beach, California

ATTEST:

\_\_\_\_\_  
 City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
 City Attorney