



PLANNING & DEVELOPMENT
BUILDING
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B54

HYDROMECHANICAL & GRAVITY GREASE INTERCEPTORS

THE PURPOSE OF THIS HANDOUT IS TO ASSIST THE PUBLIC IN COMPLYING WITH DETAILED PERMIT SUBMITTAL REQUIREMENTS. IT IS NOT A COMPLETE LIST OF PERMIT OR CODE REQUIREMENTS AND SHOULD NOT BE USED AS A SUBSTITUTE FOR APPLICABLE LAWS AND REGULATIONS.

The City of Edmonds Municipal Code for Wastewater Pretreatment (Title 7.90 through 7.102) requires all food service businesses to remove fats, oils, and grease (FOG) from their wastewater to protect the City's sewage system. An approved Hydromechanical Grease Interceptor (HGI) or Gravity Grease Interceptor (GGI), complying with the City's requirements, shall be installed downstream from fixtures or equipment that may discharge FOG from establishments such as: restaurants, cafes, cafeterias, bars, coffee shops, delis, bakeries, butcher shops, grocery stores, donut shops, hotels, hospitals, school kitchens, or other establishments where FOG may be introduced into the sanitary sewer system. In most cases, new food service facilities will be required to install a GGI, which is a two-compartment tank of at least 500 gallon capacity located underground outside the facility. Most existing businesses will be permitted to continue to use a HGI, which are much smaller units located on or in the floor near the fixtures they serve. Single family dwelling units are exempt from these requirements.

PERMIT SUBMITTAL REQUIREMENTS:

Prior to submitting your application please contact the Pretreatment Technician (office: 425-771-0237 ext. 1355; mobile: 206-595-3117; email: Rick.Bagan@edmondswa.gov) to discuss the type, size, and installation of equipment that will be required; obtain signature on sizing worksheet.

- 1) **COMPLETED GREASE REMOVAL EQUIPMENT APPLICATION FORM.**
- 2) **COMPLETED HYDROMECHANICAL GREASE INTERCEPTOR SIZING WORKSHEET OR GRAVITY GREASE INTERCEPTOR SIZING WORKSHEET**, that has been *approved and signed* by the Pretreatment Technician.
- 3) **KITCHEN FLOOR PLAN:**
Show all plumbing fixtures and drains (sinks, floor drains, soup kettle drains, wok fixture drains, mop sinks, pre-wash station, dishwasher, etc.) that are to be connected to the GGI. If the application is for a HGI, show the proposed location of the HGI and the fixtures and piping to be connected to it.
- 4) **GGI – SITE PLAN (scaled 1" = 20')**
If the application is for a GGI, provide a site plan showing the location of the building, parking and drive aisles, location and depth of existing sewer line and connecting pipes. If landscaping or parking will be disrupted, additional information may be required. If GGI lids are exposed to vehicular traffic, the unit must meet appropriate DOT/APWA load-bearing specifications.
- 5) **COPY OF EQUIPMENT SPECIFICATIONS:** Include specific size information for HGI's (e.g. 35gpm/70lb. retention). Include cut sheets and dimensions for GGI's.
- 6) Go to: Mybuildingpermit.com to apply for a Nonresidential Plumbing permit. You will be asked to upload the 5 items above during the application process. A separate Side Sewer permit may be required as well.

HYDROMECHANICAL GREASE INTERCEPTOR – INFORMATION AND MAINTENANCE

INFORMATION:

A Hydromechanical Grease Interceptor (HGI) is a smaller grease collection device installed on the interior of the building (above or below the floor line) that collects fat, oils, and grease (FOG) discharged into the waste drainage system from sinks and other grease producing fixtures. The purpose of a HGI is to protect downstream pipes and the City's sewer system by providing enough retention time to allow the FOG to separate from the water and accumulate at the top of the HGI where it can be periodically removed and discarded along with other solid wastes.

The size of the HGI is based on the number, type and flow rate of plumbing fixtures to be connected to the trap (see accompanying worksheet).

A HGI may serve up to four fixtures and must be IAPMO approved and listed. A HGI must have an approved type flow control valve or restricting device installed on the inlet of the HGI. A vent must be installed on the inlet of every HGI (follow the UPC code on HGI venting). HGI's shall be installed for easily accessible inspection, cleaning, and removal of collected grease and settled solids. HGI's should be placed as close as practical to the fixtures they serve.

NOTE: Food disposal units are not allowed in a facility served by a HGI. Food waste must be screened from entering the sewage system and disposed with the solid waste. Dishwashers shall not be connected to a HGI; therefore practices must be instituted to thoroughly rinse dishware with hot water in a sink that is connected to the HGI prior to being placed in the dishwasher.

BUSINESS OWNER RESPONSIBILITIES FOR HGI CLEANING AND MAINTENANCE:

- 1) Each food service business shall be solely responsible for the cost of the HGI installation, inspection, cleaning and maintenance.
- 2) A business may contract with a grease hauler for cleaning or the business can perform cleaning and waste removal themselves, provided the maintenance schedule is properly documented. Failure to clean and maintain the HGI may result in Notices of Violation, fines, penalties, and other civil actions as described in the City Code.
- 3) Cleaning and maintenance shall be performed on a routine schedule such that the total volume of captured grease and settled solid material never displaces more than 25% of the total volume of the HGI. The cleaning frequency shall be at least once per week unless an alternate schedule is approved by the Pretreatment Technician.
- 4) Grease and solid materials removed from a HGI shall be disposed of in the solid waste.
- 5) Records shall be maintained that include the date and time of all cleaning and maintenance of each HGI. Such records shall be available for inspection by City personnel on demand.

GRAVITY GREASE INTERCEPTOR – INFORMATION AND MAINTENANCE

INFORMATION:

Gravity Grease Interceptors (GGI) are larger grease collection devices installed on the exterior of the building and are designed for the removal of fats, oils and grease (FOG) in order to protect downstream piping and the public sewer system. GGI's are required for restaurants, commercial kitchens, school kitchens, grocery stores, hospitals, and other facilities where FOG may be introduced into the sewage system and which do not meet criteria to use an indoor HGI. GGI's are sized according to the accompanying worksheet.

The minimum sized Gravity Grease Interceptor per City Code is 500 gallons.

NOTE: A food waste disposal unit may be connected to a GGI, however, due to higher sediment loading; more frequent cleaning will be required. Wholesale grinding and disposal of food waste into the interceptor or sewer system is forbidden. All fixtures and drains, except for restroom fixtures, should be connected to the GGI.

BUSINESS OWNER RESPONSIBILITIES FOR GGI CLEANING AND MAINTENANCE:

- 1) Each food service business shall be solely responsible for the cost of the GGI installation, inspection, cleaning and maintenance.
- 2) Businesses shall contract with an approved grease hauler to perform cleaning. Pumping services shall include the complete removal of all contents, including floating materials, wastewater and bottom solids. Decanting or discharging of liquid waste back into the grease interceptor is strictly prohibited. GGI cleaning shall include removal of solids from the walls, floors, baffles, and all pipe work.
- 3) Each business shall be responsible for maintaining the GGI in good functioning order. It is recommended that the business inspect the GGI after it has been pumped out to ensure that all fittings, pipes, and baffles are in good operating condition.
- 4) The business shall maintain records of the date and time of all cleaning and maintenance and shall make this record available for inspection on demand. The City's Pretreatment Technician may perform periodic unscheduled inspections of GGI's and maintenance records to assure compliance to the code. Failure to clean and maintain the GGI may result in Notices of Violation, fines, penalties, and other civil actions as described in the City Code. If a failure to maintain a GGI leads to partial or complete blockage of the city sewer system, or adversely affects the treatment or transmission capabilities of the Wastewater Treatment Plant, or require excessive maintenance by the city, the discharger responsible of the facilities shall be subject to the remedies herein, including cost recovery by the city.
- 5) Cleaning and maintenance shall be performed on a routine schedule such that the total volume of captured grease and settled solid material never displaces more than 25% of the total volume of the unit. The cleaning frequency shall be at least once every three months unless an alternate schedule is approved by the Pretreatment Technician.



CITY OF EDMONDS
GREASE REMOVAL EQUIPMENT APPLICATION

Business Name: _____ **Date Submitted:** _____

Address: _____ **Suite #:** _____

Business Owner: _____ **Mailing Address:** _____

Contact Person/Title: _____ **Phone:** _____

Days/Hours of Operation: _____

Total Number of Meals Served Per Peak Hour (assume all seats filled): _____

Number of Seats: Dining: _____ Lounge/Bar: _____ Banquet Rooms: _____ Deck/Patio: _____

Building Occupancy Permit Capacity: _____ **Health Dept. Permit Capacity** _____

Inventory of Kitchen Equipment and Plumbing Fixtures for this Establishment: (Grills, burners, ovens, hoods, deep fat fryers, wok stations, soup kettles, sinks, pre-wash sinks, dishwashers, disposers, mop sinks, floor drains, etc.) _____

What proportion, if any, of the dishware used is of the disposable type? _____

How is waste oil/grease handled, stored, and recycled/disposed? _____

Estimate gallons of waste oil/grease produced per month: _____

If recycled, by which company? _____

How are vent hoods cleaned and where does the cleaning waste go? _____

Contact the Pretreatment Technician at 425-771-0237 ext. 1355 to discuss the type and size of equipment you must install, and then complete the appropriate accompanying worksheet for either a Gravity Grease Interceptor or a Hydromechanical Grease Interceptor.

HYDROMECHANICAL GREASE INTERCEPTOR SIZING WORKSHEET

Facility Name: _____

Address: _____ Suite #: _____

- Dishwashers are not allowed to be connected to a HGI.
- Food disposers are not allowed in a facility served by a HGI and must be disabled or removed. Solids must be screened out and placed in the solid waste container.

	Fixture Capacity in Cubic Inches (L x W x D x no. of sinks)	Fixture Capacity in Gallons (Cu. In. ÷ 231)	Drainage Load (75% of Total Capacity)	Flow Rate for a 2-Minute Drain Period
#1	___ x ___ x ___ = ___ c.i.	÷ 231 = ___ gal	x .75 = ___ gal	÷ 2 = ___ gpm
#2	___ x ___ x ___ = ___ c.i.	÷ 231 = ___ gal	x .75 = ___ gal	÷ 2 = ___ gpm
#3	___ x ___ x ___ = ___ c.i.	÷ 231 = ___ gal	x .75 = ___ gal	÷ 2 = ___ gpm
#4	___ x ___ x ___ = ___ c.i.	÷ 231 = ___ gal	x .75 = ___ gal	÷ 2 = ___ gpm
HGI #1 – Total drainage flows from maximum of 4 fixtures				_____ gpm
#1	___ x ___ x ___ = ___ c.i.	÷ 231 = ___ gal	x .75 = ___ gal	÷ 2 = ___ gpm
#2	___ x ___ x ___ = ___ c.i.	÷ 231 = ___ gal	x .75 = ___ gal	÷ 2 = ___ gpm
#3	___ x ___ x ___ = ___ c.i.	÷ 231 = ___ gal	x .75 = ___ gal	÷ 2 = ___ gpm
#4	___ x ___ x ___ = ___ c.i.	÷ 231 = ___ gal	x .75 = ___ gal	÷ 2 = ___ gpm
HGI #2 – Total drainage flows from maximum of 4 fixtures				_____ gpm

#1 Hydromechanical Grease Interceptor Size (in gpm)	35	50	75	100 or greater
#2 Hydromechanical Grease Interceptor Size (in gpm)	35	50	75	100 or greater

If the calculated size is less than 35 gpm please circle the 35 gpm box.

The Minimum Hydromechanical Grease Interceptor size is 35 gpm as per City of Edmonds Pretreatment Ordinance.

City may upsize for factors such as low temp/high volume dishwashing, if permitted, or high oil/grease content on menu, etc.

------(For City use only below this line) -----

Remarks: _____

Size Approved: _____ gpm Approved by: _____ Date: _____

Pretreatment Technician

GRAVITY GREASE INTERCEPTOR SIZING WORKSHEET

Facility Name: _____

Address: _____ Suite #: _____

- Per Edmonds City Code the minimum sized GGI permitted is 500 gallons. Maximum sized unit is 4,000 gallons.

NUMBER OF MEALS SERVED AT PEAK HOUR A = _____

*Based on the total number of seats and average time per meal.
Lounge and bar seating is counted at 20%.*

WASTE FLOW RATE (Choose one) B = _____

- With Dishwashing Machine 6 gallon flow
- Without Dishwashing Machine 5 gallon flow
- Single Service Kitchen* 2 gallon flow
- (Food Waste Disposer add 1 gallon flow)

RETENTION TIMES (Choose one) C = _____

- Commercial Kitchen Dishwasher 2.5 hours
- Single Service Kitchen* 1.5 hours

STORAGE FACTORS (Choose one) D = _____

- Full Service Kitchen 0-12 hour operation: 1
- Full Service Kitchen 12-20 hour operation: 2
- Full Service Kitchen 24 hour operation: 3
- Single Service Kitchen*: 1.5
- (Alternate factor for occasional use kitchen ____)

Minimum Interceptor Size (liquid capacity) A x B x C x D = _____

**A single service kitchen refers to a restaurant where disposable dishware is used and dishwashing operations are therefore greatly reduced.*

------(For City use only below this line) -----

Remarks: _____

Size Approved: _____gal Approved by: _____ Date: _____

Pretreatment Technician