Industrial Pretreatment Division

Industrial Waste Questionnaire

Submit this completed and signed questionnaire via mail, email, or fax to:

City of Northglenn
Industrial Pretreatment Division
12301 Claude Court
Northglenn, CO 80241

Email: ipprogram@northglenn.org
Phone: 303.450.4026
Fax: 303.450.4020

All Businesses Must Complete this Form to Fulfill EPA Regulation.

For questions regarding this questionnaire, please contact the Industrial Pretreatment Division at 303.450.4026. Based upon your business or wastewater discharge classification, an additional survey may be required.

I. Contact Information (Please Print or Type)

Business Name: _____

Mailing Address: _____

Contact Name: _____ Title: _____

Phone: _____ Email: _____

Site Address (if different that mailing address): _____

City: _____ Zip: _____ Phone: _____

II. Facility Operations and Wastewater Information

1**. Type of Business:**

☐ Commerical ☐ Industrial **SIC Code(s):** _____

2. Check all activities which are or will be present at your facility:

- ☐ Assembly
- ☐ Automotive Services
- ☐ Biotechnology
- ☐ Dental Office
- ☐ Dry Cleaning/Laundry
- ☐ Electroplating
- ☐ Flammables/Explosives
- ☐ Food Processing
- ☐ Food Service/Restaurant
- ☐ Laboratory
- ☐ Machine Shop
- ☐ Manufacturing
- ☐ Material Transfer/Distribution
- ☐ Medical Office
- ☐ Metal Finishing
- ☐ Office (not medical)
- ☐ Painting/Stripping/Finishing
- ☐ Printing
- ☐ Photo Processing
- ☐ Research
- ☐ Retail
- ☐ Vehicle/Equipment Wash
- ☐ Warehousing
- ☐ Wholesale Trade
- ☐ Other (specify):

_____

_____

3. Briefly describe your business activities (processes, products, services, etc.)**:**

_____

_____

_____

4. Is your business a Food Service Establishment (FSE)*?

☐ Yes ☐ No

* "Food Service Establishment," (FSE) is any facility engaging in preparing food for consumption by the public such as, but not limited to, restaurants, commercial kitchens, caterers, hotels, bakeries, public and private schools, hospitals, or care institutions.

If yes, please fill out the Grease Interceptor Sizing Form (attached) and attach a kitchen design plan*.

* The kitchen design plan should include drawings displaying the location of all kitchen equipment, floor sinks, and floor drains. Hand drawings or copies of plumbing/equipment plans are acceptable.

5. Indicate the type and amount of solutions or materials used in manufacturing, cleaning, or other operations whose containers exhibit hazard warning labels. *(Attach additional sheets as needed or MSDS documents. Amounts used should be listed in gallons/per day).*

_____

_____

6. Description of facilities *(Kitchen, number of restrooms, laundry facilities, chemical storage, etc.)***:**

_____

_____

7. Are there any floor drains in the work storage areas at your facility?

☐ Yes ☐ No If yes, please list location(s): _____

8. Water use (What it is used for and the approximate quantities in gallon/per day?)**:**

_____

III. Type of Wastewater Discharged into Municipal Sewer

☐ Domestic ☐ Industrial

"Domestic" (sanitary) wastewater is liquid wastes: (a) from the non-commercial preparation, cooking, and handling of food, (b) containing only human excrement and similar matter from the sanitary conveniences of dwellings, commercial buildings, industrial facilities, and institutions. All other wastewater should be considered "Industrial."

Describe any pretreatment devices or processes used for treating wastewater or sludge. (Grease interceptor, DAF, filtration, pH adjustments, etc.)**:** _____

IV. PFAS Survey

Emerging Contaminants Survey: Per or polyfluoroalkyl substances (PFAS) also called forever chemicals.

On July 13, 2020, the Colorado Department of Public Health and Environment adopted Policy 20-1 to protect drinking water from per or polyfluoroalkyl substances (PFAS). These compounds are linked to multiple health effects. The following survey assists staff to meet policy requirements as well as identifying potential programing to assist Northglenn businesses with alternatives, chemical storage, or disposal of PFAS compounds.

1) Please indicate the type(s) of fire suppression system(s) your business uses. Check all that apply:

- ☐ Hand held (fires extinguisher style)
- ☐ Ceiling/centralized delivery system
- ☐ Vent or hood system (nozzles are visible under the hood)

2) Does the label on the fire suppression system contain the letter “B” or AFFF, AR-AFFF, FFFP, AR-FFFP, FP, FPAR. Fire extinguishers also can be multi-labeled, ex. ABC.

- ☐ Yes
- ☐ No
- ☐ Unknown, not able to determine

3) To the best of your knowledge, has there ever been a fire at your place of business?

- ☐ Yes
- ☐ No
- ☐ Not known

4) Do you know whether Class B firefighting foam has been stored or spilled from its container, at your place of business?

- ☐ Yes
- ☐ No
- ☐ Not known

5) Does your business share a parking lot or is adjacent to any of the types of business listed below? Check all that apply:

- ☐ Automotive and automotive part manufacturing, including aftermarket
- ☐ Fire training facilities
- ☐ Oil and gas construction, production, storage (including tank farms), development, waste disposal, or transport facilities
- ☐ Recreational snow sports that uses ski wax
- ☐ Chrome plating facilities
- ☐ Centralized Waste Treaters: a facility that treats or recovers hazardous or non-hazardous industrial metal-bearing waste, oily waste, and organic- bearing waste from off-site
- ☐ Landfills
- ☐ Tanneries and Leather/Fabric/Carpet Treaters
- ☐ Pharmaceutical manufacturing
- ☐ Electric generating
- ☐ Rubber manufacturing
- ☐ Semiconductor manufacturing
- ☐ Worker-protection and medical textiles manufacturing
- ☐ Medical devices manufacturing
- ☐ Fluoropolymer manufacturing
- ☐ Electrical wire manufacturing

- [ ] Electronics manufacturing
- [ ] Paper and/or package manufacturing
- [ ] None of the above

6) Are any of the following products used in your business' manufacturing process? Check all that apply:

- [ ] Chemguard foam
- [ ] Scotchgard
- [ ] Tridol
- [ ] Dry chemicals used for type B fires. Class B foams are marked with any of the following designations(AFFF, AR-AFFF, FFFP, AR-FFFP, FP, FPAR)
- [ ] ANKOR WETTING AGENT F
- [ ] Clepo Chrome Mist Control
- [ ] Fumetrol 140 Mist Suppressant
- [ ] Benchmark Benchbrite STX
- [ ] Benchmark CFS
- [ ] MacDermid Proquel B
- [ ] MacDermid Macuplex STR
- [ ] Plating Process Systems PMS-R
- [ ] Femetrol-140
- [ ] Brite Guard AF-1 fume control
- [ ] Gore-Tex
- [ ] Teflon or teflon-type coating (including PTFE coatings)
- [ ] Not known
- [ ] None of the above

7) Does your business store, use, manufacture or machine any of the following agents? Check all that apply:

- [ ] Electrostatic control agents
- [ ] Friction control agents
- [ ] Dirt repellents
- [ ] Anti-adhesives

8) Which of the following services related to PFAS control would you be interested in if offered? Check all that apply:

- [ ] Educational assistance related to disposal
- [ ] Financial assistance related to disposal
- [ ] Researching PFAS alternative(s)
- [ ] Educational assistance related to storage options
- [ ] Financial assistance related to storage
- [ ] Incentives to remove PFAS substances in the manufacturing or production
- [ ] None of the above
- [ ] Other:

IV. Certificate of Information

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and attachments. Based upon my inquiry of those individuals immediately responsible for obtaining this information reported herein, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Name: _____ **Title:** _____

(Please Print)

Signature: _____ **Date:** _____

Fats, Oils, and Grease (FOG) Policy

Food service establishments will need to provide a grease interceptor sizing form, even if the location has an existing grease interceptor. Sizing forms for both gravity and hydro-mechanical interceptors are provided. They type of interceptor selected is at the discretion of the business owner.

Industrial Pretreatment Division

Gravity Grease Interceptor Design Form

Submit completed form and required attachments via mail, email, or fax to:

City of Northglenn
Industrial Pretreatment Division
12301 Claude Court
Northglenn, CO 80241

Email: ipprogram@northglenn.org
Phone: 303.450.4026
Fax: 303.450.4020

Project Name:	
Project Address:	
Date Grease Interceptor Sized:	
Company Sizing Grease Interceptor:	
Engineer Name:	
Engineer Phone:	
Engineer E-mail:	

Instructions

Form must be completed and stamped by a licensed Professional Engineer, or otherwise approved by City of Northglenn Public Works. Submit completed form and the following attachments to the Industrial Pretreatment Division:

1. Completed Industrial Waste Questionnaire
2. List of fixtures with manufacturer and model
3. Building or kitchen floor plan with fixtures noted
4. Anticipated Best Management Practices used to limit FOG entering system
5. Anticipated grease interceptor maintenance and pump-out schedule

Gravity grease interceptors are sized based on the expected flow rate of three categories of kitchen fixtures (listed below) in gallons per minute (gpm) with criteria of a hydraulic residence time of 30 minutes and a 25% FOG and solids storage factor. The design flow rate is one-third the maximum flow rate because of the bulk hydraulic compensation of short-term peak flow events. Refer to Water Research Foundation project reports 03-CTS-16Ta & b for design justification.

$$\textbf{Volume} = [\textbf{Maximum Flow Rate (gpm)}] \times \textbf{30 min} \times \textbf{1.25 Storage Factor} \div \textbf{3}$$

- **Drainage** fixtures are filled and completely drained at the end of their use and includes the 3-compartment sink and cooking equipment like tilt skillets, braising pans, rotisserie ovens and wok ranges. Flow is calculated using the Manning Formula (see page 2), which accounts for sink pipe drain size, pipe material types and pipe slope to determine the maximum flow rate from the fixture. Most Drainage fixtures connect to a single drain pipe; if the fixture connects to separate drain pipes, list it as multiple fixtures.
- **Faucet** fixtures are not filled, but instead drain at their faucet's flow rate and includes sinks for food preparation, pre-rinse, equipment cleaning and waste food disposal units. If floor drains are present, their combined flow equals the fixture(s) supplying the spray. Sinks with two faucets count as two fixtures. Ignore hand-wash-only fixtures for sizing.
- **Cleaning** fixtures have specific peak discharge rates that exceed faucet flow but are less than the maximum rate the drain pipe permits and includes dishwashers, clothes washers used for cleaning of food service-associated linens, and automatic hood cleaning systems. Enter the manufacturer-specified flow rate per discharge cycle.

Structurally, the gravity grease interceptor must be equipped a particular design of inlet, baffle wall and outlet tee. Refer to pages 3-4 for details.

Gravity Grease Interceptor Design Form

Submit completed form and required attachments via mail, email, or fax to:

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Northglenn, CO 80241

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Fax: 303.450.4020

Drainage Fixtures

$$\text{Flow Rate (gpm)} = 669 \times A \times R^{2/3} \times S^{1/3} \div n$$

$$A = 0.7254 \times [\text{Pipe Diameter (inches)} \div 12]^2$$

$$R = 0.0251 \times \text{Pipe Diameter (inches)}$$

$$S = \text{Pipe slope}, n = \text{Roughness coefficient}$$

Drainage Pipe Diameter	Minimum Slope
2 ½ inches or smaller	0.0208
3 to 6 inches	0.0104
8 inches or larger	0.0052

87.5% of horizontal drainage pipe depth is assumed wettable due to flow caused by gravity alone. Contact City if sewage ejector pumps are used.

Manning's roughness coefficient, n, depends on the material and age of the drainage pipe:

	PVC	Copper
Minimum (new)	0.008	0.010
Normal (used)	0.009	0.011
Maximum (old)	0.010	0.012

	Fixture Name	Diameter (in)	Slope	Roughness (n)	Flow Rate
1.					
2.					
3.					
4.					
				Total Drainage Fixtures Flow Rate (DFQ) =	

Faucet Fixtures

International Plumbing Code requires most faucets discharge a maximum 2.2 gpm at 60 psi and service/mop sinks should discharge a minimum 3 gpm at 8 psi. Measure flow rate if uncertain.

	Fixture Name	Maximum Flow Rate
1.		
2.		
3.		
4.		
	If floor drains exist, use flow rate for spray-supplied fixture(s)	
	Total Faucet Fixtures Flow Rate (FFQ) =	

Cleaning Fixtures

Provide manufacturer and model with list of fixtures that is provided with this form.

	Fixture Name	Mfg. Specified Flow Rate
1.		
2.		
3.		
4.		
	Total Cleaning Fixtures Flow Rate (CFQ) =	

Grease Interceptor Volume

[DFQ +	FFQ +	CFQ] ×	30 minutes ×	1.25 ÷ 3 =	Volume in gallons
			× 12.5 =		

Gravity Grease Interceptor Design Form

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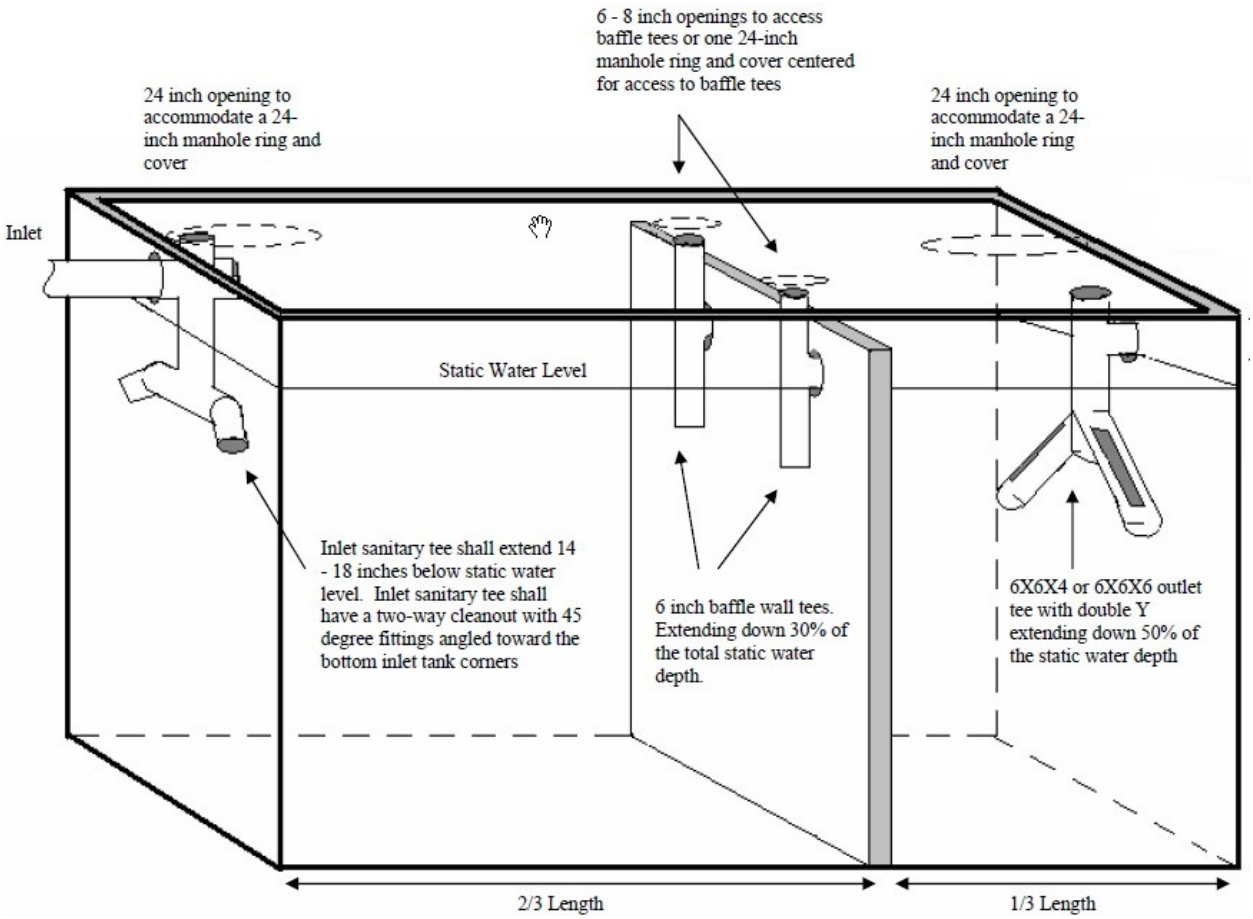
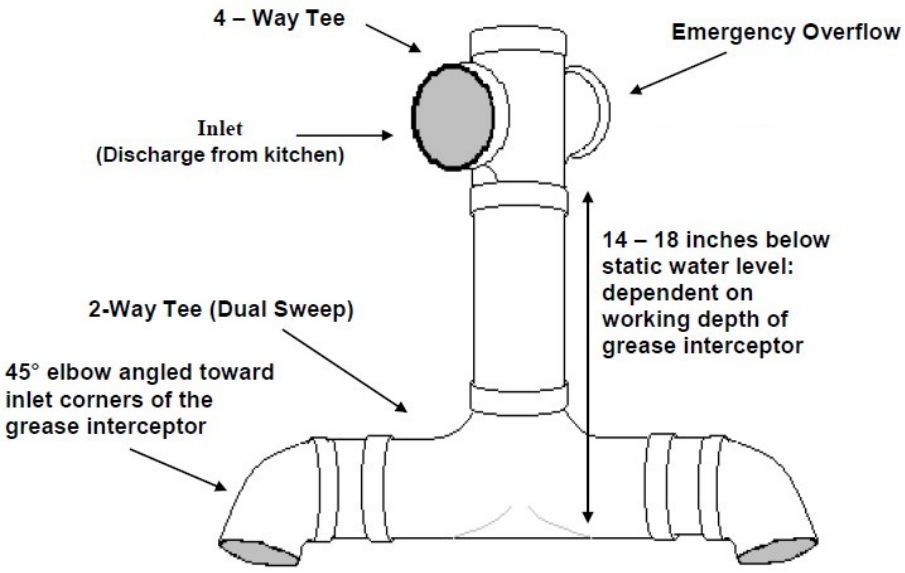
Inlet, Baffle Wall and Outlet Tee Design Overview



Inlet Tee Design



Gravity Grease Interceptor Design Form

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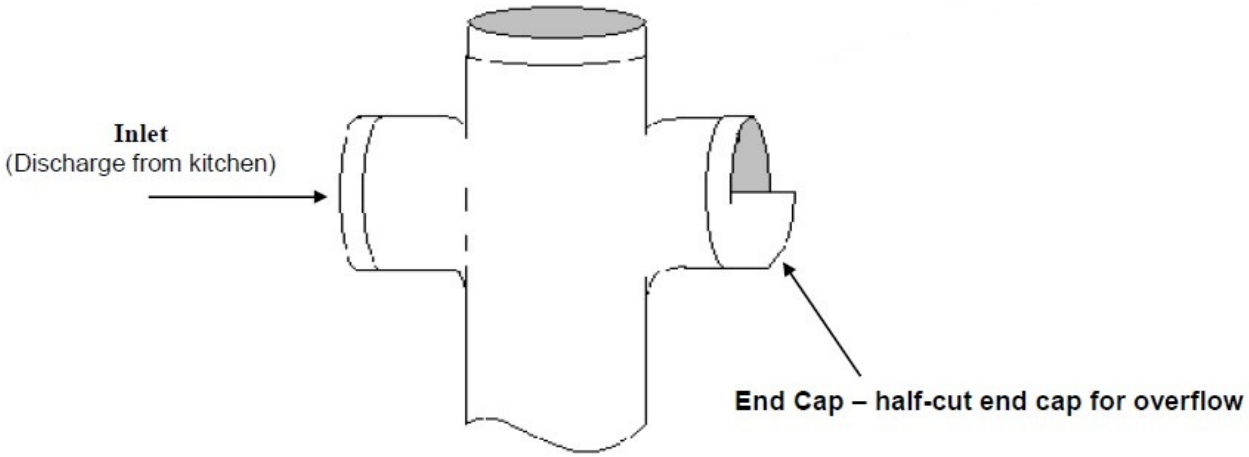
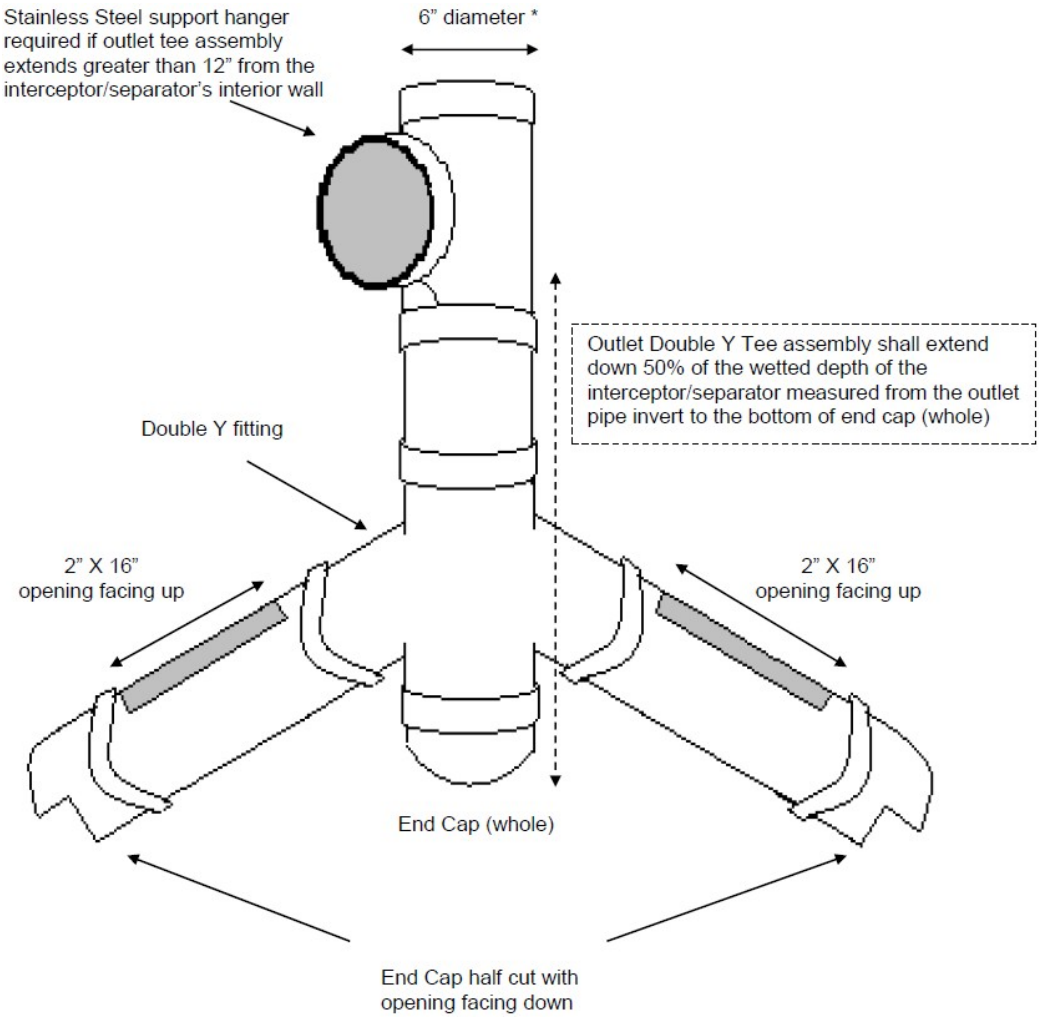
Emergency Overflow Close-up



Outlet Tee Design



FOG Sector Control Program
Hydromechanical Grease Interceptor Design Form

Project Name:	
Project Address:	
Date Grease Interceptor Sized:	
Company Sizing Grease Interceptor:	
Engineer Name:	
Engineer Phone:	
Engineer E-mail:	

Instructions

Hydromechanical grease interceptors (HGI) shall conform to the requirements contained herein. This form must be completed and stamped by a licensed Professional Engineer, or otherwise approved by City of Northglenn Public Works. Return the completed form and the following attachments to the Industrial Pretreatment division:

1. Completed Industrial Waste Questionnaire
2. List of fixtures with manufacturer and model
3. Building or kitchen floor plan with fixtures noted
4. Anticipated Best Management Practices used to limit FOG entering system
5. Anticipated grease interceptor maintenance and pump-out schedule

HGIs must be certified to ASME A112.14.3, CSA B481, or PDI G101. They may be installed indoors or outdoors and shall have the minimum flow rate in gallons per minute (gpm) based on the kitchen fixtures connected as determined in Step 1, and the minimum grease storage capacity as determined in Step 2 below.

Step 1: Calculate the minimum required flow rate for the following three types of kitchen fixtures

- **Drainage** fixtures are filled and completely drained at the end of their use and includes the 3-compartment sink and cooking equipment like tilt skillets, braising pans, rotisserie ovens and wok ranges. Flow is calculated using the Manning Formula (see page 2), which accounts for sink pipe drain size, pipe material types and pipe slope to determine the maximum flow rate from the fixture. Most Drainage fixtures connect to a single drain pipe; if the fixture connects to separate drain pipes, list it as multiple fixtures.
- **Faucet** fixtures are not filled, but instead drain at their faucet's flow rate and includes sinks for food preparation, pre-rinse, equipment cleaning and waste food disposal units. If floor drains are present, their combined flow equals the fixture(s) supplying the spray. Sinks with two faucets count as two fixtures. Ignore hand-wash-only fixtures for sizing.
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Contact Industrial Pretreatment at 303-450-4026 or ipprogram@northglenn.org for all questions

Drainage Fixtures

$$\text{Flow Rate (gpm)} = 669 \times A \times R^{2/3} \times S^{1/3} \div n$$

$$A = 0.7254 \times [\text{Pipe Diameter (inches)} \div 12]^{2}$$

$$R = 0.0251 \times \text{Pipe Diameter (inches)}$$

$$S = \text{Pipe slope, } n = \text{Roughness coefficient}$$

Drainage Pipe Diameter	Minimum Slope
2 ½ inches or smaller	0.0208
3 to 6 inches	0.0104
8 inches or larger	0.0052

87.5% of horizontal drainage pipe depth is assumed wettable due to flow caused by gravity alone. Contact City if sewage ejector pumps are used.

Manning's roughness coefficient, n, depends on the material and age of the drainage pipe:

	PVC	Copper
Minimum (new)	0.008	0.010
Normal (used)	0.009	0.011
Maximum (old)	0.010	0.012

	Fixture Name	Diameter (in)	Slope	Roughness (n)	Flow Rate
1.					
2.					
3.					
4.					
				Total Drainage Fixtures Flow Rate (DFQ) =	

Faucet Fixtures

International Plumbing Code requires most faucets discharge a maximum 2.2 gpm at 60 psi and service/mop sinks should discharge a minimum 3 gpm at 8 psi. Measure flow rate if uncertain.

	Fixture Name	Maximum Flow Rate
1.		
2.		
3.		
4.		
	If floor drains exist, use flow rate for spray-supplied fixture(s)	
	Total Faucet Fixtures Flow Rate (FFQ) =	

Cleaning Fixtures

Provide manufacturer and model with list of fixtures that is provided with this form.

	Fixture Name	Mfg. Specified Flow Rate
1.		
2.		
3.		
4.		
	Total Cleaning Fixtures Flow Rate (CFQ) =	

HGI Flow Rate

DFQ +	FFQ +	CFQ	=	Minimum flow rate
			=	

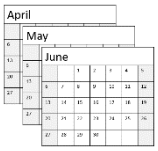
Contact Industrial Pretreatment at 303-450-4026 or ipprogram@northglenn.org for all questions

Step 2: Calculate the minimum required grease storage capacity

Once the minimum flow rate has been established in Step 1, calculate the minimum grease storage capacity for the HGI required for the desired pump-out frequency as follows:

Grease Factor from Table 2 × Meals or Customers per day × 90 days between pump-outs = Grease Capacity Required





To determine the correct grease factor, using Table 2, select the menu type (1 through 30), then the correct column (A through D) for whether there is a fryer and whether the establishment uses disposable or washable plates, bowls, cups, knives, forks and spoons (flatware).

Example: Fast food burgers and fries, with fryer, with disposable flatware, serving 300 meals per day

Grease factor from Table 2: 6C = 0.035 pounds per meal
Meals per day = 300
Days between pump-outs* = 90

0.035 × 300 × 90 = 945 pounds' grease capacity required (HGI over 500 gal liquid capacity)

*Facilities not open every day may calculate the number of days actually open in a 90-day period and use that to calculate the total amount of grease capacity required.

The correctly sized and selected grease interceptor will have the minimum flow rate determined in Step 1 and the grease storage capacity calculated in Step 2. Multiple grease interceptors may be installed to satisfy the minimum flow rate requirement, the minimum grease storage capacity, or both.

HGIs certified to meet the minimum requirements of ASME A112.14.3, CSA B481, and/or PDI G101, shall have the flow rates and minimum grease storage capacities as listed in Table 1.

HGIs with grease capacities that exceed Table 1, shall be submitted for approval along with third-party test report, including incremental test data, that validates the grease capacities claimed.

HGI Flow Rate	Minimum Grease Storage Capacity[2] (lbs)
20	40
25	50
35	70
50	100
75	150
100	200

2. Minimum grease capacity as required by ASME A112.14.3, PDI G101 and CSA B481

Table 1

To determine the correct grease factor, using Table 2, select the menu type (1 through 30), then the correct column (A through D) for whether there is a fryer and whether the establishment uses disposable or washable plates, glasses, knives, forks and spoons (flatware).

		Without fryer, without flatware	Without fryer, with flatware	With fryer, without flatware	With fryer, with flatware
Type	**Menu** **Grease Factor ->**	A	B	C	D
1	Bakery	0.035	0.0455	0.035	0.0455
2	Bar and Grille	0.005	0.0065	0.025	0.0325
3	Barbeque	0.035	0.0455	0.035	0.0455
4	Breakfast Bar - Hotel	0.005	0.0065	0.025	0.0325
5	Buffet	0.035	0.0455	0.058	0.0754
6	Burger and fries, fast food	0.035	0.0455	0.035	0.0455
7	Cafeteria	0.025	0.0325	0.035	0.0455
8	Caterer	0.005	0.0065	0.025	0.0325
9	Chinese	0.035	0.0455	0.058	0.0754
10	Coffee / Beverage shop	0.025	0.0325	0.035	0.0455
11	Convenience Store	0.005	0.0065	0.025	0.0325
12	Deep fried Chicken / seafood	0.035	0.0455	0.058	0.0754
13	Deli	0.005	0.0065	0.025	0.0325
14	Family Restaurant	0.035	0.0455	0.035	0.0455
15	Frozen Yogurt	0.005	0.0065	0.025	0.0325
16	Greek	0.025	0.0325	0.035	0.0455
17	Grocery Bakery	0.025	0.0325	0.035	0.0455
18	Grocery Deli	0.025	0.0325	0.035	0.0455
19	Grocery Meat Department	0.025	0.0325	0.025	0.0325
20	Ice Cream	0.025	0.0325	0.035	0.0455
21	Indian	0.025	0.0325	0.035	0.0455
22	Italian	0.035	0.0455	0.035	0.0455
23	Mexican, fast food	0.035	0.0455	0.035	0.0455
24	Mexican, full fare	0.035	0.0455	0.058	0.0754
25	Pizza	0.025	0.0325	0.035	0.0455
26	Religious Institution	0.005	0.0065	0.025	0.0325
27	Sandwich shop	0.005	0.0065	0.025	0.0325
28	Snack Bar	0.005	0.0065	0.025	0.0325
29	Steak and seafood	0.035	0.0455	0.058	0.0754
30	Sushi	0.005	0.0065	0.025	0.0325

Table 2

Contact Industrial Pretreatment at 303-450-4026 or ipprogram@northglenn.org for all questions

Step 1: Calculated Flow Rate

HGI Flow Rate =

Step 2: Calculated Grease Capacity

Grease Factor (Table 2): Bakery without fryer, without flatware

Meals or customers served per day:

Days open in 90-day period:

Grease produced in 90-day period (lbs):

A correctly sized and selected HGI(s) will have the minimum required flow rate determined in Step 1 and the minimum grease capacity determined in Step 2.

What is the make and model of the HGI chosen?

Flow rate (GPM):

Liquid capacity (gal):

Certified grease capacity (lbs):

Please submit the completed Grease Interceptor Sizing and Selection Worksheet to the City of Northglenn for approval along with the documents listed on Page 1.

The correctly sized and selected grease interceptor will have the minimum flow rate determined in Step 1 and the grease storage capacity calculated in Step 2. Multiple grease interceptors may be installed to satisfy the minimum flow rate requirement, the minimum grease storage capacity, or both.

HGIs certified to meet the minimum requirements of ASME A112.14.3, CSA B481, and/or PDI G101, shall have the flow rates and minimum grease storage capacities as listed in Table 1.

HGIs with grease capacities that exceed Table 1, shall be submitted for approval along with third-party test report, including incremental test data, that validates the grease capacities claimed.