



Des Moines Metropolitan Wastewater Reclamation Authority
3000 Vandalia Road
Des Moines, IA 50317-1346



Dear Owners and Managers of Food Service Establishments,

The Des Moines Metro Wastewater Reclamation Authority (WRA) is committed to providing safe, cost-effective wastewater service to commercial and residential customers within our service area. We are equally dedicated to operating our wastewater system in an environmentally responsible manner. The City of Des Moines and surrounding Metropolitan cities have an ordinance to limit and control the introduction of fats, oil and grease (FOG) into the sanitary sewer system. This ordinance in its entirety can be located at www.dmmwra.org following the link on the right to FOG program and municipal code.

The FOG ordinance is the result of a mandate from the EPA which requires each municipality to install a program of oil and grease control to aid in the prevention of sanitary sewer blockages and overflows that adversely impact public health and the environment. The requirements for food service establishments (FSEs) are as follows:

- FSEs are required to install a grease interceptor with a minimum capacity of 1000 gallons if the facility is proposed or constructed after the effective date; or if the facility is renovated to include a FSE where such FSE did not previously exist; or if the FSE has been closed for 12 months or more; or if an existing FSE applies for a building permit(s) valued at \$50,000 or more within a 12 month period; or if an existing FSE adds or alters wastewater piping; or if an existing FSE does not adequately operate and maintain existing grease removal devices or use Best Management Practices (BMPs) to meet FOG discharge limits.
- Grease Removal Devices must be cleaned, complete with a maintenance log, at three (3) month intervals or when total FOG and solids reach 25% of the design liquid level. Owner or operator of the FSE must employ a waste hauler that is licensed and certified by the WRA.
- The introduction of enzymes, emulsifying chemicals, bacteria, hot water or other agents into a grease interceptor to dissolve or emulsify grease is prohibited, unless prior written approval is received from the WRA Director.

The WRA has developed a comprehensive grease control program which will affect your business. During the next few months, a WRA representative will visit each FSE within the WRA service area to collect data on facility operation, grease control practices and distribute educational material regarding the FOG program. We will contact you to schedule a convenient time for our visit.

If you have questions or would like additional information, please call Jason Merk, FOG Coordinator at 515-323-8123 or Paul Ebert, Regulatory Compliance Manager at 515-323-8133. You are a valued customer of the Des Moines Metro WRA and we appreciate your cooperation in making our cities safe for the public and our environment.

Sincerely,

Scott Hutchens, P.E.
WRA Director
WRA Waste Water Reclamation Facility

SH/ajf



WRA Grease Interceptor Sizing Proposal



Date: _____

Facility Name: _____

Address: _____ City: _____

Contact Name and Title: _____

Phone: _____ Email: _____

Contact Address (if different): _____

Plumbing Contractor: _____

Type of Food Service Establishment (FSE)

- | | | |
|--|---|---|
| <input type="checkbox"/> Full Service Restaurant | <input type="checkbox"/> Assisted Living / Nursing Facility | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Single Service Restaurant | <input type="checkbox"/> Grocery | <input type="checkbox"/> Church |
| | | <input type="checkbox"/> School / Daycare |

Grease Interceptor Sizing – **Must not be less than the Ordinance minimum of 1000 gallons.**

1. Peak Meals per Hour (if unknown use formula below)

Seating Capacity or Occupancy of FSE*	X	Meal Factor**	=	Peak Meals per Hour
<div style="border: 1px solid black; width: 60px; height: 40px; margin: 0 auto;"></div>		<div style="border: 1px solid black; width: 60px; height: 40px; margin: 0 auto;"></div>		<div style="border: 1px solid black; width: 60px; height: 40px; margin: 0 auto;"></div>

- * Church: include all area(s) used for meal service
- * Assisted Living / Nursing Facility: equal to max number of residents (per State license)
- ** Meal Factor: 1.3 (for 45-minute meal) or 1.0 (for intermittent use FSE)

2. Waste Flow Rate

- | | |
|--|---|
| a. Commercial, equipped kitchen with dishwasher & one garbage disposal* | 7 |
| b. Commercial, equipped kitchen with dishwasher, no garbage disposal | 6 |
| c. Commercial, equipped kitchen with no dishwasher, one garbage disposal* | 6 |
| d. Commercial, equipped kitchen with no dishwasher, no garbage disposal | 5 |
| e. Single service kitchen** | 2 |
| * Each additional garbage disposal, add one (1) gallon | |
| ** Single service kitchen = no garbage disposal, no dishwasher and all service is single use | |

3. Retention Time

- | | |
|---------------------------|-----|
| a. Commercial kitchen | 2.5 |
| b. Single service kitchen | 1.5 |

4. Storage Factor

- | | |
|---|-----|
| a. Commercial Kitchen up to 8 hours of operation | 1 |
| b. Commercial Kitchen up to 12 hours of operation | 1.5 |
| c. Commercial kitchen up to 16 hours of operation | 2 |
| d. Commercial kitchen up to 20 hours of operation | 2.5 |
| e. Commercial kitchen up to 24 hours of operation | 3 |
| f. Single service kitchen | 1.5 |

Peak Meals per Hour	X	Waste Flow Rate	X	Retention Time	X	Storage Factor	=	Calculated GI Size
<div style="border: 1px solid black; width: 60px; height: 40px; margin: 0 auto;"></div>		<div style="border: 1px solid black; width: 60px; height: 40px; margin: 0 auto;"></div>		<div style="border: 1px solid black; width: 60px; height: 40px; margin: 0 auto;"></div>		<div style="border: 1px solid black; width: 60px; height: 40px; margin: 0 auto;"></div>		Minimum 1,000 gallons

Proposed installation is as follows: _____

The following must be submitted for an official sizing request:

- ☐ Completed *Grease Interceptor Sizing Proposal* (completed by a professional engineer or licensed plumber)
- ☐ Kitchen plumbing blueprint
- ☐ Kitchen equipment list
- ☐ FSE site plan showing seating capacity OR square feet / occupancy
- ☐ Verification of current Grease Interceptor size by a professional engineer or licensed plumber (if applicable)

Submit to: Jason Merk, WRA FOG Program (515) 323-8063 (fax) OR jcmerk@dmgov.org

*Des Moines Metropolitan Wastewater Reclamation Authority
3000 Vandalia Road, Des Moines, IA 50317, (515) 323-8000*



Grease Interceptor Exceptions for Food Service Establishments (FSEs)



The FOG Ordinance allows for two exceptions to the installation of a properly sized, WRA approved grease interceptor. Requests for one of these exceptions must be submitted in writing to the WRA Director at 3000 Vandalia Road, Des Moines, IA 50317.

The two types of exceptions and required material for a complete submittal are:

1. Exceptional Physical Constraints:

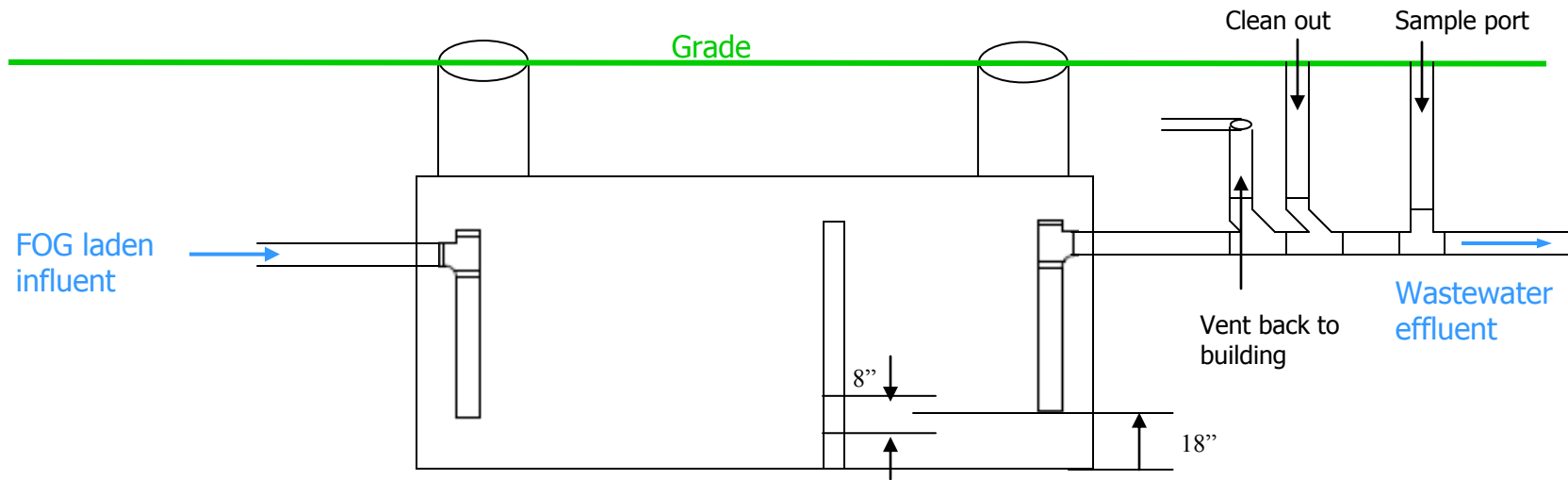
- a. Detailed description of the FSE's physical constraint.
- b. Grease interceptor sizing calculations (the size required if there were no physical constraints) from a licensed plumber or engineer.
- c. Detailed description of the proposed alternative grease control technology from a licensed plumber or engineer:
 1. Alternative grease control technology calculations.
 2. Detailed site plan of kitchen plumbing and equipment list.
 3. Detailed site plan showing FSE occupancy.
- d. Documentation and plats showing the location of city / county sanitary sewer, private easements in relation to the building sewer for the building housing the FSE and available space inside or outside the building and drawings of existing plumbing at or in a site that uses common plumbing for all services at the site.

2. Exceptional Economic Hardship:

- a. Detailed description of the FSE's financial constraints.
- b. Grease interceptor sizing calculations and quote from a license plumber or engineer.
- c. Detailed description and quote for the proposed alternative grease control technology from a license plumber or engineer:
 1. Alternative grease control technology calculations.
 2. Detailed site plan with kitchen plumbing and equipment list.
 3. Detailed site plan showing FSE occupancy.
- d. Documentation of balance sheets and detailed profit / loss statements for an existing FSE for the preceding three years.
- e. A business plan and detailed profit / loss projections for a minimum of 24 months for a new FSE.

Exceptions approved by the WRA Director must include an alternative grease control technology that allows the establishment to meet the FOG Ordinance discharge limit of 400 mg/L fat, oil, and grease at all times.

Grease Interceptor Installation Guidelines



- 1,000 gallon minimum—5,000 gallon maximum.
- When greater than 5,000 gallons of capacity is required, the tanks shall be put in series. Each tank must be properly vented and have a clean out. A sample port is only necessary on the final effluent.
- Pipe shall be a minimum of 4" cast iron or PVC (PVC pipe must be bedded properly). Risers for C.O., & Test port must be Cast Iron, or sleeved to grade.
- Flow line must be below frost line (42").
- Lid covers shall be adjusted to grade (tar or tar rope may be used to seal risers and lids).
- Piping inside the tank shall be PVC; the outlet fitting shall be a sanitary tee and shall be accessible through the lid.
- The interior PVC piping shall terminate at approximately 18" off the bottom of the tank.
- Minimum vent size is 2"; the vent shall run back to the interior of the building and out through the roof; this will be a flat vent and will be allowed by inspectors. May tie into existing vent system.
- Sample port shall be 4" minimum and the fitting at the flow line shall be a vent tee.



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Suggested installation of a grease interceptor at a food service establishment. There are other installation options that can be discussed with the proper municipal building authority.