

## **Step-by-Step Guide for New or Remodeled Food Service Establishments**

### **Step 1: Determine Food Service Establishment (FSE) Class.**

SD1 utilizes a four-class system to help determine the size and type of grease control equipment (GCE) needed for each FSE. SD1 reserves the right to add or subtract from this class system at its discretion. Classes are:

- Class 1:** Day care facilities, delis, ice cream shops, coffee shops, beverage bars and any other facility that engages in the sale of cold cut or microwave sandwiches with no frying or grilling onsite
- Class 2:** Limited-service restaurants, full-service restaurants, fast food facilities, caterers, bakeries, supermarkets and other grocery stores that engages in the onsite preparation of food including but not limited to, convenience stores, gasoline stations and discount department stores
- Class 3:** Buffet and cafeteria facilities
- Class 4:** Institutions (*i.e.* schools, hospitals, prisons, etc)

### **Step 2: Determine GCE minimum size requirement**

SD1's minimum size requirements for GCE are based on FSE Class. GCE size requirements are as follows:

- Class 1:** Day care facilities, delis, ice cream shops, coffee shops, beverage bars and any other facility that engages in the sale of cold cut or microwave sandwiches with no frying or grilling onsite:
  - 25 gallons per minute/50 pound capacity grease trap, located on three-compartment sink
- Class 2:** Limited-service restaurants, full-service restaurants, fast food facilities, caterers, bakeries, supermarkets, other grocery stores including but not limited to, convenience stores, gasoline stations and discount department stores with onsite food preparation:
  - 1,000 gallon grease interceptor
- Class 3:** Buffet and cafeteria facilities:
  - 1,500 gallon grease interceptor
- Class 4:** Institutions (schools, hospitals, prisons, etc):
  - 2,000 gallon grease interceptor or two 1000 gallon grease interceptors installed in series

## Exemptions and Alternative Design Requests.

### Exemptions

Single service kitchens with no onsite food preparation (heat and serve only), and which use only disposable serviceware (utensils) may not be required by SD1 to install GCE and can therefore apply for an exemption. An example of this would be a small daycare facility.

To receive consideration for an exemption, the FSE owner or designee must complete and submit SD1 Plan Submission/Exemption Request Form.

### Alternative Design Requests:

To address circumstances where required GCE size or design may not be compatible with existing buildings or plumbing, a request can be made to install GCE that deviates from policy requirements.

Alternative designs must be based on the Plumbing and Drainage Institute (PDI) Formula for sizing GCEs. Proposed GCE capacity must meet or exceed the total volume of wastewater that can be produced by the FSE's kitchen.

To receive consideration for an Alternative Design Request, the FSE owner or designee must complete and submit SD1 Plan Submission/ Exemption Request Form.

Plumbers, contractors or FSE owners installing a GCE that deviates from policy requirements should use the following chart to determine sizing.

Steps	Formula	Example
1	<u>Determine cubic content of fixture</u>  Multiply length x width x depth	A sink 48" long by 24" wide by 12" deep  Cubic content $48 \times 24 \times 12 = 13,824$ cubic inches
2	<u>Determine capacity in gallons</u> (cubic inches/cubic inches per gallon)  1 gallon = 231 cubic inches	Content in gallons  $13,824/231 = 59.8$ gallons
3	<u>Determine actual drainage load</u> The fixture is normally filled to about 75% of capacity with water. The items being washed displace about 25% of the fixture content, thus actual drainage load = 75% of fixture capacity	Actual drainage load  $0.75 \times 59.8 = 44.9$ gallons
4	<u>Determine flow rate and drainage period</u> <i>Good practice dictates a 1-minute drainage period</i>  Flow Rate = drainage load/drainage period	Calculate flow rate for 1-minute period:  $44.9/1 = 44.9$ gallons per minute (GPM) Flow Rate
5	<u>Select trap that corresponds to the flow rate calculated.</u>  <i>Note: Select next larger size when flow rate falls between two available sizes.</i>	Select trap.  For 1-minute period – 44.9 GPM requires 50 GPM Trap

Note: The three-compartment sink, hand sink, prep sink and mop sink should to flow to the GCE.

Where a single grease trap serves multiple fixtures, calculate the capacity of each fixture and total the fixture capacities. Then, using the GPM capacity calculated, proceed with sizing the trap to the nearest GCE size. Select the next larger size when calculated flow rate falls between two available sizes.

### **Step 3: Submit Plans and documents to SD1's Plan Review Group.**

The documents listed below must be submitted for SD1 approval. Please submit the SD1 Plan Submission/Exemption Request Form with all plan submittals. In order to be approved, all of the following information must be included with your form.

#### **FSE Floor Plans:**

Plans must show all kitchen fixture lines discharging to GCE.

#### **Plumbing Plans (P1/P2):**

Plumbing sheets should include identification of all cooking and food preparation equipment (*i.e.* fryers, grills, woks, etc.); the number and size of dishwashers, sinks, floor drains and other plumbing fixtures; greasy-waste-bearing plumbing lines; the location of GCE; and specifications for GCE.

The discharge from all FSEs designated Class 2-4 shall have the following fixtures plumbed to GCE: all sinks (three-compartment, vegetable prep, mop, etc), dishwashers, floor drains in food preparation and storage areas, garbage disposals and other fixtures through which grease may be discharged such as woks and soup ladles.

#### **GCE Specifications:**

Specifications should include make, model and size of GCE. Size should be expressed in GPM/LBS.

Documents may be emailed to [info@sd1.org](mailto:info@sd1.org) or mailed to:

**SD1  
Plan Review Group  
1045 Eaton Dr.  
Ft. Wright KY, 41017**

**Attn: Greg Haggard**

### **Step 4: Obtain approval from SD1's Plan Review Group.**

SD1's Plan Review Group will review the submitted plans and documents and respond in writing with either an approval of the plans or with a description of why the plans do not comply with the FOG Management Policy. Visit [www.SD1.org/fog](http://www.SD1.org/fog) to view the FOG Management Policy in its entirety.

**Step 5: Schedule a GCE inspection by SD1's Inspection Group.**

An inspection of the GCE and the fixtures tying into it will be performed by SD1's Inspection Group. To schedule an inspection, contact the **SD1 Inspection Group** at **859-578-7460**.

Please note: Inspection should be scheduled 48 hours prior to installation completion so that GCE and plumbing pipes are exposed for inspection, and if any discrepancies are found, they can be fixed before completion.

If the inspection is approved, an inspector will have a responsible party sign the inspection form showing approval.

**Step 6: SD1's Industrial Pretreatment Department will issue a FSE Permit.**

SD1's Industrial Pretreatment Department will meet with the FSE to go over the permit and requirements.