TOWN OF SEABROOK, NEW HAMPSHIRE
Sewer Department, Industrial Pretreatment Program

SUBJECT: **Grease Trap Sizing and Installation**

Purpose

The Seabrook Municipal Sewer System Ordinance [Article II, Section 2.2 (P) and Article III, Section 3.2 (C)] requires the use of specialized grease management equipment where necessary to prevent the discharge of fats, oil and grease to the municipal sanitary sewer in excess of the Town limit of 100 milligrams per liter. Where feasible, the Town requires all food service establishments to have a properly designed outdoor, in-ground gravity grease interceptor. For certain establishments, however, existing indoor grease traps may be given limited "grandfather" status while, in other rare instances, space limitations or other unique circumstances make an indoor grease trap the only viable method for managing oil and grease discharge.

Grease traps, by definition, may only be used where the calculated maximum peak flow does not exceed 50 gallons per minute (gpm). The purpose of this document is to provide guidance for the sizing and installation of grease traps.

Grease trap sizing

Grease traps must meet or exceed the minimum size requirement established by the *Plumbing and Drainage Institute* (PDI). Trap sizing is based on the calculated *maximum peak flow*. PDI certified grease traps are available in 4, 7, 10, 15, 20, 25, 35, and 50 gallon per minute sizes. There are two methods for calculating the *maximum peak flow* for a plumbing fixture.

Calculating maximum peak flow for a fixture using the Volume Method:

1. Determine the *total capacity* of each fixture. Example: For a rectangular sink, multiply the length times the width times the depth of the basin and divide by 231 (the number of cubic inches in a gallon). This yields the total number of gallons the sink can hold.

2. Multiply the total capacity by 0.75. This is quantity is called the *drainage load*.

3. *Maximum peak flow* is normally calculated using a theoretical drain time of one minute (that is, with the grease trap in place it will take one minute to completely empty a sink that is ¾ full). A sink with a *drainage load* of 4.2 gallons would, therefore, have a calculated *maximum peak flow* of 4.2 gallons per minute. In certain cases, the Town may allow the installation of a smaller trap based on a theoretical drain time of two minutes, In that case, you would divide the *drainage load* by two to calculate the *maximum peak flow*. Examples of some typical *drainage loads* are given in Table 1 on the following page.

Table 1.

Basin Size	Drainage Load (gallons)
18 x 12 x 6	4.2
16 x 14 x 8	5.8
20 x 18 x 8	9.4
18 x 16 x 8	7.5
20 x 18 x 8	9.4
30 x 20 x 8	15.6
24 x 20 x 12	18.7
22 x 20 x 8	11.4
22 x 20 x 12	17.1
24 x 24 x 12	22.4

Calculating maximum peak flow for a fixture using the Drainage Fixture Unit Method:

To do this, you need to know that one Drainage Fixture-Unit equates to a flow rate of 7.5 gallons per minute (GPM). You determine the number of Drainage Fixture-Units based on the size of the drain outlet or drain trap, as shown in Table 2 below.

Table 2.

Outlet or Trap Size	Fixture-Unit Value	Maximum Peak Flow (GPM Equivalent)
1-1/4 inch	1	7.5
1-1/2 inch	2	15
2 inch	3	22.5
2-1/2 inch	4	30
3 inch	5	37.5
4 inch	6	45

Dishwashers

The Town recommends that commercial dishwashers be plumbed directly to the sanitary sewer, not to a grease trap. If, however, you choose to plumb a dishwasher to a grease trap, it must be a dedicated device. Wastewater from the dishwasher may not flow into a grease trap that receives wastewater from any sink or other fixture.

Every kitchens that is equipped with a commercial dishwasher is required to implement *Best Kitchen Management Practices* to minimize the amount of grease that goes down the drain. Information regarding *Best Kitchen Management Practices* is available upon request from the Industrial Pretreatment Program Office.

Calculating minimum trap size

To determine the minimum size grease trap required for your kitchen, add together the *maximum peak flows* for the greatest number of the sinks and other wastewater sources that could discharge to the trap at the same time. The minimum required trap size it the smallest size that is **equal to or greater than** the sum of all of the *maximum peak flows*. Remember, traps are available in 4, 7, 10, 15, 20, 25, 35, and 50 gallon per minute sizes.

If the total is greater than 50 GPM, then either multiple grease traps or an in-ground grease interceptor is required.

Grease trap installation

1. Correct installation of one and only one properly rated flow control fitting per grease trap is mandatory.

2. Correct installation of a properly sized air intake at the flow controller is mandatory.

3. Correct installation of a drain vent between a drain trap and the grease trap is mandatory. *This only applies if a drain trap is present.*

4. Correct installation of a drain vent downstream of the grease trap is mandatory. *This applies in all cases.*

5. The grease trap must be easily accessible for cleaning and inspection.

6. The grease trap cannot be further than 25 feet from the furthest fixture drained.

7. If installed on a line that drains from a garbage grinder, the trap must be installed downstream of an adequate solids interceptor.

8. Any line draining a dishwasher must have a dedicated grease trap.

Contact Information

Please contact the Industrial Pretreatment Program Office for assistance with the sizing or installation of your grease trap.

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