



GLOBAL WATER RESOURCES (“GLOBAL WATER”)

DESIGN STANDARD

FOOD SERVICE OPERATIONS

APPLICATION

This Design Standard for food service operations defines the requirements for managing waste discharged, directly or indirectly, into a sewer connected to a sewage facility from restaurants, or other facilities employing food service as a primary or secondary business operation.

This Design Standard applies to:

- a. operators of a food services operation that adds kitchen equipment that has the potential to discharge oil and grease;
- b. operators of a food services operation that discharges non-domestic waste to sewer that exceeds any of the restricted waste criteria specified in the Design Standard - Definitions; or
- c. any food service operation, as determined by the Global Water.

DISCHARGE REGULATIONS

An operator of a food service operation must not discharge waste, which at the point of discharge into a sewer, contains:

- a. oil and grease in a concentration that is in excess of 100 milligrams per liter as analyzed in a grab sample;
- b. suspended solids in a concentration that is in excess of 350 milligrams per liter as analyzed in a grab sample;
- c. 5-day biochemical oxygen demand (BOD5) in a concentration that is in excess of 350 milligrams per liter in a grab sample;
- d. exceeds the limits outlined in Design Standard – Definitions for restricted wastes; or
- e. includes prohibited waste, special waste, stormwater, or uncontaminated water.

GREASE INTERCEPTORS

Grease interceptors are required to be installed and maintained by the owner and/or operator of food service operations within the collection system of Global Water facilities. Grease interceptor installations shall conform to the requirements of this Design Standard.



Design

The rated flow capacity of each grease interceptor installed in food services establishments shall not be less than the maximum discharge flow from all plumbing fixtures connected to the grease interceptor that will discharge simultaneously.

The rated flow capacity of each grease interceptor must be established using the “Plumbing and Drainage Institute Standard PDI-G101” or equivalent test as approved by Global Water’s engineer.

Each grease interceptor must have either:

- a. an internal flow control fitting, or
- b. a flow control fitting installed on the inlet line¹.

All grease interceptors must be labeled with information containing the rated flow capacity of the unit. The label shall be permanently affixed and visible following installation. Where a permanently affixed and visible label is not possible or practical, manufacturer and installation drawings of the grease interceptor shall be maintained at the site and shall be available for inspection by Global Water staff on request.

Design Flow Rates

The operator of a food services operation must calculate the maximum discharge flowrate to a grease interceptor by adding together the flowrates from each fixture that will discharge simultaneously using the following method to estimate the flowrate from each fixture:

- a. for sinks, calculate the total volume of each sink and assign a drain time of one minute;
- b. for exhaust hoods with an automatic cleaning cycle, measure the discharge flowrate or use the manufacturers estimate of peak discharge flowrate during the automatic wash cycle;

¹ The flow control fitting must be sized to limit the flow to a rate that is no more than the rated flow capacity of the grease interceptor.



c. for floor drains, estimate the flowrate using the following table:

Floor Drain Diameter	Drain Rate
Inches	GPM
2	22
3	37.5
4	45

- d. for drains on other equipment, use the table in Section (c) or if the drain size is less than 2 inches in diameter either:
- i. measure the discharge flowrate, or
 - ii. refer to manufacturers estimated peak discharge flowrate, or
 - iii. use a minimum of 22 GPM; and
- e. for automatic dishwashers, measure the discharge flowrate or use the maximum discharge flowrate specified by the dishwasher manufacturer.

Where the rated flow capacity of a grease interceptor is exceeded by the maximum discharge flowrate from all plumbing fixtures that will be discharged simultaneously to the grease interceptor, the operator of a food services operation must:

- a. install a grease interceptor that has a rated flow capacity equal to or greater than the maximum discharge flowrate from all plumbing fixtures connected to the grease interceptor that will discharge simultaneously; or
- b. install additional grease interceptors so that the maximum discharge flowrate from fixtures connected to each grease interceptor that will discharge simultaneously does not exceed the rated flow capacity of the grease interceptor; or
- c. have a plan approved by GWR's engineer showing how the discharge of waste will be managed.

Installation

A grease interceptor must be located so that it is readily and easily accessible for inspection and maintenance. A sampling point shall be installed as follows:



- a. a sampling tee shall be located either at the outlet of the grease interceptor or downstream of the grease interceptor at a location upstream of any discharge of other waste;
- b. the sampling tee shall be not less than 4 inches in diameter, and shall be installed so that it opens in a direction at right angles to and vertically above the flow of the sewer pipe; and
- c. the sampling tee shall be readily and easily accessible at all times for inspection.

Maintenance

An operator of a food services operation shall maintain all grease interceptors installed in connection with the food services operation in accordance with the manufacturer's recommendations so that the grease interceptors function properly.

An operator of a food services operation must not permit oil and grease to accumulate in a grease interceptor in excess of the lesser of six inches or 25% of the wetted height of the grease interceptor.

An operator of a food services operation shall not dispose of oil and grease from a grease interceptor to a sewer. All cleaning or grease removal shall be accomplished by employing vacuum trucks or other means to preclude any grease from entering the collection system.

An operator of a food services operation must not use or permit the use of chemical agents, enzymes, bacteria, solvents, hot water or other agents to facilitate the passage of oil and grease through a grease interceptor without the express written consent of Global Water.

Connections to Grease Interceptors

An operator of a food services operation shall have the following fixtures connected to the grease intercept system:

- a. sinks used for washing pots, pans, dishes, cutlery and kitchen utensils;
- b. drains serving self-cleaning exhaust hoods installed over commercial cooking equipment;
- c. drains serving commercial cooking equipment that discharges oil and grease;



- d. drains serving a garbage compactor used to compact waste that may contain, or be contaminated with, food waste; or
- e. other fixtures that discharge wastewater containing oil and grease.

The following fixtures shall not be connected to a grease interceptor:

- a. garburators (garbage grinders), potato peelers and similar equipment discharging solids;
- b. toilets, urinals and hand sinks;
- c. automatic dishwashers²

Outdoor Garbage Compactors

An owner of an outdoor garbage compactor installation connected to a sewer must install works as necessary to prevent rainwater from entering the drain connected to the sewer.

SAMPLING

At the request of Global Water, the operator of a food services operation shall confirm the operation of any grease interceptor via analytical testing. This testing shall be performed by an accredited laboratory, and paid for by the owner of the grease interceptor.

RECORD KEEPING AND RETENTION

An operator of a food services operation must keep a record at the food services operation of all grease interceptor inspection and maintenance activities including:

- a. the date of inspection or maintenance;
- b. the maintenance conducted;
- c. the type and quantity of material removed from the grease interceptor; and
- d. the location of disposal of the material removed from the grease interceptor.

² An automatic dishwasher may be connected to a grease interceptor provided that there are no other fixtures connected to the grease interceptor and the grease interceptor is sized to accept the maximum discharge flowrate specified by the dishwasher manufacturer.



The records shall be retained for a period of two years, and shall be available on request to Global Water Staff.

Failure to comply with this Design Standard could result in termination of service and/or a required monthly cleaning manifest, inspections and monitoring schedule.