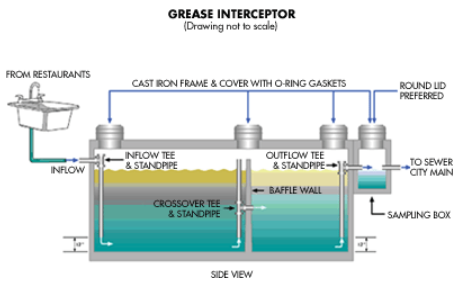
Best Management Practices: Grease Management for Restaurants and Commercial Kitchens

Outdoor commercial grease interceptor. Note that sanitary wastewater is routed to bypass the interceptor to keep grease clean for reuse or recycling.



Schematic diagram of outdoor grease interceptor. Sizing the interceptor properly helps ensure that most of the grease is trapped and removed from the waste stream.

Typical under the sink style grease trap. Generally range in size from 80 to 150 liters per minute. Must be cleaned daily to prevent odor and clogging.

The Philippine Sanitation Alliance: The PSA is a program of the United States Agency for International Development which brings together cities and private sector partners to develop affordable solutions to sanitation challenges.

The Best Management Practices (BMPs) presented below are effective and practical measures you can implement now to take control of your grease management issues in your restaurant or kitchen:

BMP #1: Training. Management should provide ongoing training for all kitchen staff on the importance of following the BMPs to minimize problems with grease accumulation. Training provides reminders to staff and will result in a greater chance that the BMPs will be implemented.

BMP #2: Use a three compartment sink for dish and utensil washing instead of the mechanical dishwasher when possible. The mechanical dishwasher uses temperatures of 70°C (160° F) and this will dissolve the grease and make it harder to remove in the grease interceptor. To use the three compartment sink, you wash in the first compartment, rinse in the second compartment, and sanitize in the third compartment using a 50 to 100 ppm chlorine solution (which can be easily tested with chlorine test strips).

BMP #3: Keep water temperature below 60 °C (140 ° F) in all compartments of the 3 compartment sink. This also applies to the pot sink and pre-rinsing sink before the automatic dishwasher. Hotter temperatures will dissolve the grease in the grease trap and wash it through to the piping and wastewater discharge. Lower temperatures will reduce the cost of energy for heating water. Check temperatures frequently to verify.

BMP 4. Post "NO GREASE" signs.
Signs should be posted on the front of dishwashers and three compartment sinks. The signs will serve as a reminder to the staff working in the kitchens. Keeping grease out of the sinks and dishwashers will reduce the frequency of grease trap cleaning and the cost of disposal.

NOTE: the mechanical dishwasher should never be connected to the grease trap. The hotter temperatures and higher volumes will wash out the grease trap and increase grease in the wastewater discharge.

BMP #5: Recycle waste cooking oil and grease trap grease when possible. There are a number of commercial uses for reclaimed restaurant grease and oil including the production of biodiesel and tallow, which is used for making candles and other products. If there are no grease recyclers in your community, working together with other restaurants to develop collaborative grease management programs may be a good first step. Pictured to the right is a sample of biodiesel prepared from restaurant grease.

BMP #6: "Dry wipe" pots and pans with a paper towel prior to washing. By "dry wiping" pots and pans and disposing of the paper towel in the garbage bin, grease and food particles go to the landfill instead of ending up in the grease trap.

BMP #7: Dispose of food waste by recycling, or treating as solid waste. Food waste is often recycled for animal feed. When such recycling is not available, dispose of food particles in the trash. Never use the garbage disposal or otherwise put food particles down the drain. Use sink strainers to keep food particles from going down the drain, and then place the strainings in the trash. This practice helps keep food particles out of grease traps and reduces the frequency and cost of maintenance.

BMP #8: Restaurant managers should oversee the grease trap and grease interceptor cleaning operations every time. Workers and contract pumpers often take short cuts that may leave grease in the trap or interceptor. This BMP helps ensure that the establishment is getting value for the cost of interceptor pumping services. It will also help to minimize odors from old grease in under-the-sink style grease traps.

BMP # 9: Clean under-the-sink grease traps at least once a week or when they are 25% full of grease. For some restaurants that prepare a lot of fried foods, the traps should be cleaned every shift. When establishments use both under the sink grease traps and outdoor grease interceptors (recommended), regular grease trap cleaning by the restaurant staff will minimize the costs and frequency of pumping out the grease interceptor.

BMP # 10: Clean outdoor grease interceptors routinely. This is usually accomplished by calling the septic tank pumper who will remove the contents of the interceptor with a vacuum truck. Routine inspection and cleaning will result in better operations and less grease and oil entering the wastewater discharge. Never allow the grease interceptor to accumulate more than 25% grease and solids. Inspect the grease interceptor with a hand spade and plastic tube. First, from the tank access port, dig a hole in the top of the grease with the spade, then insert the plastic tube to the bottom of the tank. Feel for resistance as the tube reaches the bottom as this indicates the upper level of the accumulated solids at the bottom of the tank. Then cover the end with your hand and withdraw to get a core sample of the tank contents. You will be able to see the depth of the liquid oil floating on the top.

BMP 11: Keep a maintenance log. The maintenance log serves as a record of the frequency and volume of the grease trap and grease interceptor cleaning. It will provide management with information they can use to predict how often grease traps and tanks should be cleaned. It also increases accountability of the staff. Use the recommended format below:

Grease Trap and Interceptor Operation and Maintenance Log

Date	Maintenance Performed	Quantity Removed	Maintenance performed by:	Signature of Responsible Party

Special Thanks to:

The King County Washington, USA Inter- Agency Resource for Achieving Cooperation (IRAC) manual: A Guide To Restaurant Grease Management. Available on-line at: http://www.govlink.org/hazwaste/publications/irac_grease.pdf