

FOG Best Management Practices

Is grease a problem? In the sewage collection and treatment business the answer is an emphatic **YES!** Problems range from blocked sewer lines, rancid odors and potential health hazards to pump station failure. Large amounts of oil and grease in the wastewater cause trouble in the collection system pipes. They often decrease pipe capacity and therefore require that piping systems be cleaned more often and/or some piping to be replaced sooner than otherwise expected. Oil and grease also hamper effective treatment at the wastewater treatment plant. Concerns caused by wastes generated by food service facilities have served as the basis for ordinances and regulation governing the discharge of grease material to the wastewater collection system. This type of waste has forced the requirements of the installation of preliminary treatment devices, commonly known as grease traps or interceptors.

Fats, Oil, and Grease (FOG) Best Management Practices

1. Implement a training program to educate kitchen staff and other employees about how they can help ensure Best Management Practices (BMPs) are followed. People are more willing to support an effort if they understand the basis for it. Please feel free to contact Portage County Industrial Compliance to obtain assistance in this effort.
2. Post **"NO GREASE"** signs above sinks and on the front of dishwashers. The signs will serve as a constant reminder for the staff working in the kitchen.
3. Always use sink basket strainers to collect food wastes. Never use garbage disposals.
4. Always dry wipe pots and pans and dishware prior to dishwashing. This will reduce the amount of material going to the grease traps or interceptors, which will require less frequent cleaning, thereby reducing maintenance costs.
5. Capture accumulated oil during the cleaning of stoves and ventilation exhaust hoods. Dispose of through solid waste procedures after absorbing all free liquid.
6. Solid waste disposal of food waste will reduce the frequency and cost of grease trap or interceptor cleaning.
7. Use water temperatures less than 140 degrees (Fahrenheit) in all the sinks. Temperatures in excess of 140 degrees (Fahrenheit) will dissolve grease, but the grease can re-congeal or solidify in the wastewater collection system as the water cools. This has an added benefit for the food service establishment by reducing its costs for the energy used in heating the water.
8. Eliminate the use of garbage disposals and or food grinders. These devices put large quantities of solids into the collection and treatment systems.
9. Recycle waste cooking oil through an established, reputable recycling facility. The food service establishment may be paid for the waste material and well reduce the amount of garbage it must pay to have hauled away.
10. Do not discharge caustics, acids, or solvents to the wastewater collection system. These can have other harmful effects on the wastewater treatment system and can be hazardous to employees working in the wastewater collection system.
11. Do not use biological or emulsifying agents without written approval from the Director of Portage County Water Resources.

BEST MANAGEMENT PRACTICES (BMPs)

Properly Maintain Grease Traps and Interceptors to Prevent Introduction of Grease into the Sanitary Sewer System			
BMP	Reason For	Benefits to Food Service Establishment	Pretreatment Inspection Tips
Witness all grease trap or interceptor cleaning maintenance activities to ensure the device is properly operating.	Grease trap/interceptor pumpers may take shortcuts. If the establishment manager inspects the cleaning operation and ensures it is consistent with the procedures in the section on Grease Trap and Interceptor Maintenance they are more assured of getting full value for their money.	The establishment will ensure it is getting value for the cost of cleaning the grease trap or interceptor. Otherwise the establishment may be paying for cleaning more often than necessary.	None.
<p>Clean undersink grease traps weekly.</p> <p>If grease traps are more than 50% full when cleaned weekly, the cleaning frequency needs to be increased.</p>	<p>Undersink grease traps have less volume than grease interceptors.</p> <p>Weekly cleaning of undersink grease traps by the establishment's own maintenance staff will reduce the cost of cleaning the grease interceptor.</p> <p>If the establishment does not have a grease interceptor, the undersink grease trap is the only mean of preventing grease from entering the sanitary sewer system. If the grease trap is not providing adequate protection, the local sewer agency may require installation of a grease interceptor.</p>	This will extend the length of the cleaning cycle for grease interceptors that the establishment maintains.	<p>Visually inspect the contents of the undersink grease trap.</p> <p>Inspect cleaning records.</p>
Clean grease interceptors routinely.	<p>Grease interceptors must be cleaned routinely to ensure that grease accumulation does not cause the interceptor to operate poorly.</p> <p>The cleaning frequency is a function of the type of establishment, the size of the interceptor, and the volume of flow discharged by the establishment.</p>	Routine cleaning will prevent plugging of the sewer line between the food service establishment and the sanitary sewer system. If the line plugs, the sewer line may back up into the establishment, and business will need to hire someone to unplug it.	<p>Interceptor should have no more than 1/3 the depth as grease, <u>and</u>,</p> <p>Interceptor should have no more than ¼ the depth of sediment, <u>and</u>,</p> <p>No more than 25% of the depth should be a combination of grease(top) and sediment (bottom).</p>
Keep a maintenance log	The Maintenance log serves as a record of the frequency and volume of cleaning the interceptor. It is required by the pretreatment program to ensure that grease trap/interceptor maintenance is performed on a regular basis.	The maintenance log serves as a record of cleaning frequency and can help the establishment manager optimize cleaning frequency to reduce cost.	<p>Inspect maintenance log.</p> <p>Provide the establishment with a sample maintenance log if it does not have one.</p> <p>Confirm the maintenance log with the grease hauler identified.</p>

BEST MANAGEMENT PRACTICES (BMPs)

Prevent Fats, Oil and Grease From Entering Creeks and Streams Through the Storm Drain System

BMP	Reason For	Benefits to Food Service Establishment	Pretreatment Inspection Tips
<p>Cover outdoor grease and oil storage containers.</p> <p>Some Local Jurisdictions will have BMPs in place for storm water also.</p>	<p>Uncovered grease and oil storage containers can collect rainwater. Since grease and oil float, the rainwater can cause an overflow onto the ground. Such an overflow will eventually reach the storm water system and nearby streams.</p>	<p>The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams by adding biological and chemical oxygen demand to the stream.</p> <p>Discharge of grease and oil to the storm drain might also result in legal penalties or fines.</p>	<p>Observe storage area for signs of oil and grease.</p> <p>Inspect containers for covers.</p> <p>Remove covers to ensure containers have not overflowed and do not have excess water.</p>
<p>Locate grease dumpsters and storage containers away from storm drain catch basins.</p>	<p>The farther away from the catch basin, the more time someone has to clean up spills or drainage prior to entering the storm drain system.</p> <p>Be aware of oil and grease dripping on the ground while carrying waste to the dumpster, as well as oil and grease that may ooze from the dumpster.</p>	<p>The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams by adding biological and chemical oxygen demand to the stream.</p> <p>Discharge of grease and oil to the storm drain might also result in legal penalties or fines.</p>	<p>Observe storage areas for signs of oil and grease.</p> <p>Inspect the closest catch basin for signs of accumulated grease and oil.</p>
<p>Use absorbent pads or other materials in the storm drain catch basins if grease dumpsters and containers must be located nearby.</p> <p>Do not use free flowing absorbent materials such as kitty litter or sawdust.</p>	<p>Absorbent pads or materials can serve as an effective barrier to grease and oil entering the storm drain system.</p>	<p>The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams by adding biological and chemical oxygen demand to the stream.</p> <p>Discharge of grease and oil to the storm drain might also result in legal penalties or fines.</p>	<p>Check the nearest catch basin and drainage paths for signs of grease and oil.</p> <p>Require absorbent pads if the basin is within 20 ft of grease dumpsters or containers, or if there are signs of grease in the catch basin at any distance.</p> <p>Do not permit the use of free flowing absorbent material such as kitty litter.</p>
<p>Use absorbent pads or other material to clean up spilled material around outdoor equipment, containers or dumpsters.</p> <p>Do not use free flowing absorbent materials such as kitty litter or sawdust that can be discharged to the storm drain system.</p>	<p>Absorbent pads or materials can help clean up grease and oil that spilled on the ground and prevent it from flowing to the storm drain system.</p>	<p>The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams by adding biological and chemical oxygen demand to the stream.</p> <p>Discharge of grease and oil to the storm drain might also result in legal penalties or fines.</p>	<p>If grease and oil are observed on the ground in the storage area, recommend the use of absorbents to minimize movement of the grease and oil.</p> <p>Do not permit the use of free flowing absorbent material such as kitty litter.</p>
<p>Routinely clean kitchen exhaust system filters.</p>	<p>If grease and oil escape through the kitchen exhaust system, it can accumulate on the roof of the establishment and eventually enter the storm drain system when it rains.</p>	<p>The discharge of grease and oil to the storm drain system will degrade the water quality of receiving streams by adding biological and chemical oxygen demand to the stream.</p> <p>Discharge of grease and oil to the storm drain might also result in legal penalties or fines.</p>	<p>Inspect roof (if safely accessible) for signs of oil and grease.</p> <p>Require a maintenance schedule and records for cleaning exhaust filters. Cleaning is usually by washing, which will discharge the grease to the interceptor where it can be controlled.</p>

BEST MANAGEMENT PRACTICES (BMPs)

Prevent Blockages in the Sanitary Sewer System			
BMP	Reason For	Benefits to Food Service Establishment	Pretreatment Inspection Tips
Train kitchen staff and other employees about how they can help ensure BMPs are implemented.	People are more willing to support an effort if they understand the basis for it.	All of the subsequent benefits of BMPs will have a better chance of being implemented.	Talk to the establishment manager about the training program that he/she has implemented.
Post “No Grease” signs above sinks and on the front of dishwashers.	Signs serve as a constant reminder for staff working in kitchens.	These reminders will help minimize grease discharge to the traps and interceptors and reduce the cost of cleaning and disposal	Check appropriate locations of “No Grease” signs.
Use water temperatures less than 140 F in all sinks, especially the pre-rinse sink before the mechanical dishwasher. The mechanical dishwasher requires a minimum temperature of 160 F, but the Uniform Plumbing Code (UPC) prohibits discharging the dishwasher to grease traps.	Temperatures in excess of 140 F will dissolve grease, but the grease can re-congeal or solidify in the sanitary sewer collection system as the water cools.	The food service establishment will reduce its costs for the energy – gas or electric – for heating the water.	Check boiler or hot water heater discharge temperature. Measure the temperature of the hot water being discharged from the closest sink.
Use a three-sink dishwashing system, which includes sinks for washing, rinsing and sanitizing in a 50-100 ppm bleach solution. Water temperatures are less than 140 F. (see above)	The three-sink system uses water temperatures less than 140 F where a mechanical dishwasher requires a minimum temperature of 160 F (see above) Note: The Uniform Plumbing Code (UPC) prohibits the discharge water from going to grease traps.	The food service establishment will reduce its costs for the energy – gas or electric – for heating the water for mechanical dishwasher and for operating the dishwasher.	Measure temperature of the hot water at the three-sink system.
Recycle waste cooking oil.	There are many waste oil recyclers throughout Ohio. This is a cost recovery opportunity. See Haulers and Recyclers .	The food service establishment will be paid for the waste material and will reduce the amount of garbage it must pay to have hauled away.	Obtain name of recycler used. Review recycling records. Confirm records with recycler.
“Dry wipe” pots, pans and dishware prior to dishwashing.	The grease and food that remains in pots, pans and dishware will likely go to the landfill. By “dry wiping” and disposing in garbage receptacles, the material will not be sent to the grease traps and interceptors.	This will reduce the amount of material going to grease traps and interceptors, which will require less frequent cleaning, reducing maintenance costs.	Observe dishwashing practices.
Dispose of food waste by recycling and/or solid waste removal.	Some recyclers will take food waste for animal feed. In the absence of such recyclers, the food waste can be disposed of as solid waste in landfills by solid waste haulers.	Recycling of food wastes will reduce the cost of solid waste disposal. Solid waste disposal of food waste will reduce the frequency and cost of grease trap and interceptor cleaning.	Inspect grease traps and interceptors for food waste accumulation. Confirm the recycler or solid waste removal company with the establishment manager.