



An Informational Approach to Managing Food Materials and FOG

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This fact sheet is provided to encourage businesses such as food service providers, processors, distributors, and merchandisers to eliminate waste and recover/recycle food materials. Food waste can produce several environmental impacts. For example, food materials discharged to a wastewater treatment plant will contribute to increased levels of BOD (biological oxygen demand), COD (chemical oxygen demand), TSS (total suspended solids), and O/G (oil and grease). Examples of these food materials include preparation wastes, uneaten portions, grease, batter waste, dairy products, beverages containing sugar, and dressings. Also, food materials discarded into the solid waste stream contribute to odor and methane generation at disposal facilities and to increased BOD and COD levels in landfill leachate.

Food materials are excellent candidates for reduction, recovery, and reuse. Reducing materials at their source, coupled with recovery, reuse, and recycling prevents pollution and reduces, and in some cases eliminates, treatment and disposal costs. A successful waste reduction program can result in cost savings and possible generation of revenues. These activities also contribute to a positive public image for the company, benefits to the community, and protection of the environment.

Segregate Food Wastes for Beneficial Uses

To increase their recyclable potential, food materials should be clean and free of trash such as paper, glass, and plastic. Also, depending upon the requirements of recyclers, solid food wastes should be separated from liquid food wastes to enhance their recyclability.

- **Excess edible food** should be kept separate from waste food and routed to a local food bank or food donor program.
- **Solid food waste** should be segregated from waste oils and greases. Hog, cattle, and poultry producers are interested in collecting food waste to use as animal feed. Dairy and bread waste may be fed to hogs without further handling, but other food waste or mixed food waste must be cooked before being fed to hogs. Local cooperative extension agents also may assist with locating markets for waste food.
- **Waste fats, oils, and grease (FOG)**
Free grease is that used for or generated by cooking and has not been mixed with water. It is generated from pots, pans, grills, and deep fat fryers and comes from butter, lard, vegetable fats and oils, meats, nuts, and cereals. Free grease should be kept out of the drains and handled separately. Rendering facilities may purchase free grease and meat wastes and provide storage and collection. The market price depends upon factors such as volume, quality, and hauling distances. The rendering services will process free grease by sampling it for pesticides and other chemicals and filtering and volatilizing impurities before reselling it. If the volume of the wastes generated from one restaurant or cafeteria is too small for the rendering facility, businesses should explore the feasibility of setting up a cooperative collection among similar businesses.

Trap grease is that collected in a grease trap. Because fats coat, congeal, and accumulate on pipes and pumps and sometimes obstruct sewer lines, food service establishments are required to maintain grease traps. Specific information about trap maintenance is presented below. Some rendering services and local

septage haulers will service or pump out these traps for a fee, and some services may reduce the pumping fee if the restaurant is a free grease customer.

Dry Cleanup to Keep Wastes Out of the Drain

Food preparation facilities should develop dry cleanup procedures to the greatest possible extent. Dry cleanup procedures will reduce the amount of food waste that enters the drains and, thus, help reduce the possible surcharges.

- **The “first pass”** in equipment and utensil cleaning should be made with scrapers, squeegees, or absorbents to prevent the bulk of food materials from going down the drain. Studies have shown that for a fast food restaurant, 93 percent of the oil and grease discharged to the wastewater treatment plant is generated from ware washing. For a full service restaurant, 75 percent of the oil and grease discharged to the wastewater treatment plant is generated from the pot sink. Waste collected on this “first pass” could be set aside for rendering or, possibly, composting.
- **Spills.** Dry cleanup can be applied also to spills in the kitchen. Spills of dry ingredients should be swept up or vacuumed to prevent them from being washed down the drain.
- **Garbage Disposals.** Businesses that use garbage disposals to dispose of food waste are simply transferring disposal from a landfill to a wastewater treatment plant. Disposal of food waste via the sewer system is more costly than landfill disposal and acts as a disincentive to reduce generation of food waste or to separate food for donations, rendering, animal feed, or composting.

Maintaining Grease Traps

Food preparation facilities that discharge to a municipal sewer should contact the Regulatory Compliance Pretreatment Department at (812) 426-2820 for any requirements concerning the need for interceptors and grease trap management. One of the most important management procedures for grease traps is that a company representative must make sure that any cleaning, pumping, or skimming performed by a contractor is done thoroughly. This safeguard permits management to respond appropriately to any questions about the services performed.

- **Pump out schedules** should be properly established and strictly followed to prevent overflows, downstream blockage, excessive oil and grease, and BOD loading to wastewater. It is important that these pump outs are complete, i.e., the grease caps removed, the sides scraped or hosed down, and the trap refilled with water. The contractor should indicate whether the trap is refilled with clean water or water from the trap.
- A food preparation facility should **never “hot flush”** (continuously run hot water) the grease trap as the heated, liquefied grease will be flushed down the sewer. While hot flushing may divert the need for pumping, the facility is liable for any costs associated with clogs caused by the flushing.
- **Skimming services** are available to skim grease traps on a regular basis. These facilities will reprocess the grease collected and notify owners when complete grease trap pump outs are necessary.

Facility Waste Reduction Program

Management Commitment. The most critical step to successful waste reduction is commitment by the owner(s)/managers of a facility to a waste management plan. A detailed waste reduction program should be developed that outlines policies and procedures for dealing with waste and assigns individual responsibilities for all waste related activities.

Employees will be aware of the degree of commitment by management and will rise or fall to the level that is expected or allowed. It is, therefore, important to have realistic goals that can be achieved, recognized, and rewarded.

Employee training is a significant component of a waste reduction program, and all employees from managers to the clean-up crew should be included. The training sessions, which should be repeated on a regular basis, should teach waste awareness, and the impact of various food wastes on the wastewater stream.