

# Restaurant Oil and Grease Rendering



**Grease Goblin**

Improperly managed oil and grease from restaurants has become a significant problem for wastewater collection and treatment systems. Fats, oils, and greases (FOG) coat, congeal, and accumulate in pipes, pumps, and equipment, leading to the costly and hazardous flow of waste grease into drain lines, sewer lines, lift stations, drain fields, and Publicly Owned Treatment Works (POTWs). Improper disposal can result in high biological oxygen demand (BOD) and chemical oxygen demand (COD) levels, increased operating costs, and clogged collection systems. A large percentage of the reported sewer system overflows in Georgia are caused by FOG blockage of the sewers.

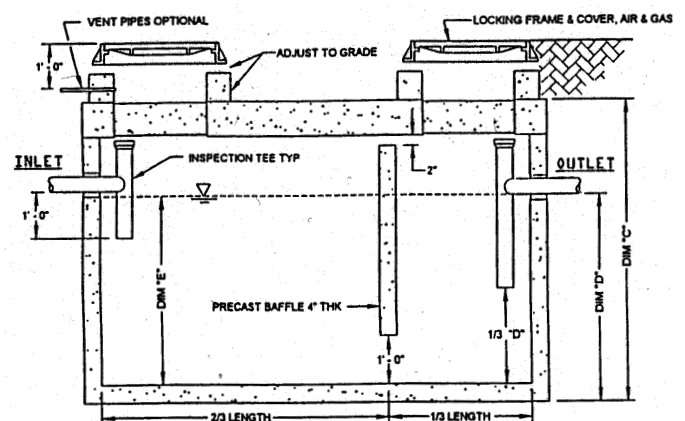
## Different Types of Oils and Grease

- Recyclable 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. Recyclable grease should be kept out of the drains and handled separately. Rendering facilities may purchase recyclable 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 recyclable grease by sampling it for pesticides and other chemicals and filtering and volatilizing impurities before reselling it, where prices may range from one to three cents per pound. 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.

- Restaurant kitchen waste water contains oil and grease that is 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 by most local governments to install and maintain grease traps. Specific information about trap maintenance is presented in P<sup>2</sup>AD's *Fact Sheet for Best Management Practices for Fats, Oils and Grease*. 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 recyclable grease customer.

## Where Does Grease Go When It Leaves a Restaurant?

A grease trap is designed to prevent grease, oil, solids, and other debris from entering the waste stream, where it becomes a problem by clogging sewers and disrupting the



*Basic grease trap design*

OCTOBER 2000

water flow in the system. The grease trap captures those wastes and contains them until a waste hauler or pumper service can properly dispose them.

A grease trap should be checked and maintained to ensure it is working properly. Backups, odors, and drainage problems are signs that the grease trap is not functioning as it should. See P<sup>2</sup>AD's *Fact Sheet for Best Management Practices for Fats, Oils and Grease* for specific tips on proper maintenance of grease traps.

## Grease Recycling

While pretreating wastewater through the use of grease traps, skimmers, separators, and process flow treatment systems such as carbon filtration or coagulation units can greatly reduce the problem, source reduction of oil and grease must be the first course of action. Through dry cleanup, the development of an efficient collection system and rendering program, wastewater problems can be avoided. Rendering companies or "grease recyclers" will accept oil, grease, and other animal byproducts, including deep fry fat and bones, thereby turning a nuisance waste material into a beneficial product such as animal feeds.

## How is Waste Oil and Grease Recycled?

Waste oil and grease is tested for pesticides and other contaminants. Material is placed in a settling tank to remove solids, heated in a vacuum to volatilize impurities and is then sold to companies for use as animal feed additives, in soap production, oils, cosmetic and skin care products, and in composting.

## Benefits of Rendering

- **Compliance** – Many communities have sewer use ordinances that severely limit the allowable concentrations of oil and grease in wastewater. New state policies are being enacted that will require more communities to develop sewer use ordinances and wastewater discharge limitations. Penalties may be incurred when higher concentrations are found. Rendering prevents grease from reaching the sewer

system and thereby helps restaurants maintain compliance.

- **Cost Avoidance** – The charge for pumping out a grease trap is considerably more than the service fee charged by a renderer. Furthermore, with dry cleanup and other source reduction techniques, many restaurants are reducing their water consumption and sewer use and are saving money. Rendering also helps restaurants avoid discharge penalty charges.
- **Economic Incentives** – Renderers' service fees are low and often provided at no charge. In some cases, rendering companies are willing to pay for restaurant oil and grease.
- **Environmental Savings** – Natural resources and energy are conserved through source reduction and recycling. FOG recycling keeps these materials from clogging municipal sewer lines, as well as using valuable landfill space and diverts it to a useful purpose.

## Where to Find Renderers

Contact P<sup>2</sup>AD at (404) 651-5120, or (800) 685-2443 (outside of Atlanta) for a list of Georgia grease renderers. Local pretreatment coordinators, wastewater superintendents, and local health departments are also good sources of information.

## Questions to Ask a Renderer

When looking for an oil and grease renderer, it is important to ask the right questions, which may include:

- 1) Do you provide collection containers?
- 2) Do you provide transportation?
- 3) Can I expect revenue for my material? If not, what is your service fee?
- 4) What are your specifications? What constitutes contamination?
- 5) If there is a problem, who should I contact?

Remember that fats, oils, and greases are commodities and should be treated as valuable resources that can and should be recycled whenever possible.



The **Grease Goblin** is the mascot for P<sup>2</sup>AD's Oil and Grease Management Program. He serves as a reminder to keep grease out of sinks and drains before it becomes a nuisance.