



Restaurant Oil and Grease Rendering

Improperly managed oil and grease from Food Service Establishments (FSEs) such as restaurants has become a significant problem for wastewater collection and treatment systems. Fats, oils, and grease (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 overflow in Orange County is caused by FOG blockage of the sewers.

Different Types of Oils and Grease

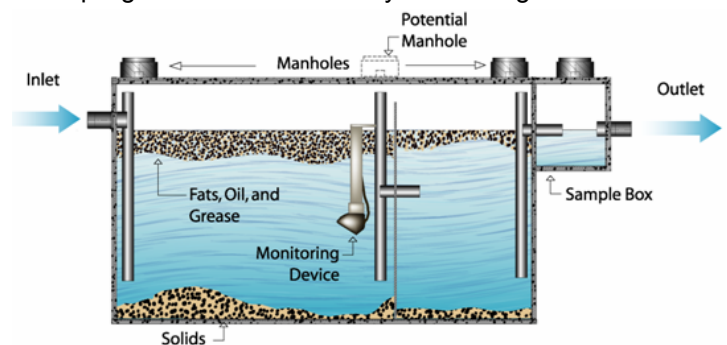
Recyclable grease is that used for or generated by cooking and has not been mixed with water. It is generated from pots, pans, grills, and deep fat fryers and comes from butter, lard, vegetable fat and oils, meats, nuts, and cereals. Recyclable grease should be kept out of the drains and handled separately. 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 FSE

(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 wastewater contains oil and grease that is collected in a grease interceptor. 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 interceptors. Specific information about grease interceptor maintenance is presented in the OCSD's Fact Sheet for Grease Interceptor. Some rendering services and local septage haulers will service or pump out these grease interceptors for a fee, and some services may reduce the pumping fee if the FSE is a recyclable grease customer.

Where Does Grease Go When It Leaves a Restaurant?

A grease interceptor is designed to prevent grease, oil, solids, and other debris from entering the wastestream, where it becomes a problem by clogging sewers and disrupting the water flow in the system. The grease



interceptor captures those wastes and contains them until a waste hauler or pumper service can properly dispose them.

A grease interceptor should be checked and maintained to ensure that it is working properly. Backups, odors, and drainage problems are signs that the grease interceptor is not functioning as it should. See OCSD's Fact Sheet for Grease Interceptor for specific tips on proper maintenance of grease interceptors.

Grease Recycling

While pretreating wastewater through the use of grease interceptors, 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 and 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 feed.

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 discharge of FOG 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 FSEs maintain compliance.

- **Cost Avoidance** - The charge for pumping out a grease interceptor is considerably more than the service fee charged by a renderer. Furthermore, with dry cleanup and other source reduction techniques, many FSEs are reducing their water consumption and sewer use and are saving money. Rendering also helps FSEs 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 oil and grease from FSEs.
- **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.

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 FOG is a commodity and should be treated as a valuable resource that can and should be recycled whenever possible.

Where to Find Renderers

Contact the California Integrated Waste Management Board at (916-341-6000) for a list of grease renderers or visit their website: www.ciwmb.ca.gov.