

Restaurant Oil and Grease Rendering

Introduction

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 (POTW). Improper disposal can result in high biological oxygen demand (BOD) and chemical oxygen demand (COD) levels, increased operating costs, and clogged collection systems. Approximately 30% of sewer system overflows in North Carolina are caused by FOG blockage of the sewers.

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 water flow in the system. The grease trap captures those wastes and contains them until a rendering company 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.

Grease Recycling

While pre-treating 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

Visit the North Carolina Directory of Markets for Recyclable Materials at www.p2pays.org/DMRM/default.htm. Local pretreatment coordinators and wastewater superintendents 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:

Do you provide collection containers?

Do you provide transportation?

Can I expect revenue for my material? If no, what is your service fee?

What are your specifications? What constitutes contamination?

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.