

## Grease Is The (Dirty) Word

*Susan Daywitt*

Are you managing your facilities' risk?

Managing fats, oils and grease (FOG) goes hand in hand with running a restaurant. But as municipal requirements become more stringent, managing, documenting and maintaining grease traps and related equipment has become more demanding.

Environmental regulations are tightening. Documentation and reporting requirements are becoming more rigorous. Would your facilities pass muster if all locations were to be inspected within the next 24 hours? A sobering question, but one worth your attention.

Today, all points along the wastewater stream are under more scrutiny. With municipalities settling violations in the millions of dollars, they are moving responsibility upstream to the source of the effluent discharge. Even restaurants that are currently in compliance face fines if they are late in filing required documentation or are tardy in bringing operations up to code.

### Tightening Legislation

There are many examples of new legislation dictating the disposal of FOG.

In October 2015, the Connecticut Department of Energy and Environmental Protection reissued a general permit for the discharge of wastewater associated with food service establishments, which limits the amount of FOG, increases the maintenance requirements of equipment and expands the approved options of grease management equipment. The town of Saugus, Mass., passed a new regulation, also in 2015, that requires all establishments preparing or selling fresh food to install an internal grease trap—as well as an external grease trap or secondary interior grease interceptor. Existing establishments have 18 months to comply.

A perfect example of the trickle-down effect of EPA changes is that of Anderson, S.C. A new FOG ordinance being passed as a result of excessive sewer overflow violations will create more rules for local restaurants, resulting in stricter grease trap installation and maintenance. There will be new fees for food service establishments, as well as requirements for such businesses to show that they are using approved grease waste haulers. These new ordinances impact both the restaurants and many of the service providers that pump restaurant grease traps. Operating costs rise and get passed along to facilities.

This is why procedural paperwork, documentation and record retention are as important as the physical process of maintaining your hardware. Not all vendors are created equal, so you must be certain that your scope of work with the vendor requires and details the level of rigor you must have to keep your restaurant compliant.

In speaking with Maria Johnson, CRFP, Facilities Director at Cotton Patch Café, she explained that having a single point of contact for 90 percent of the company's 45 locations helps ensure that service manifests are maintained and submitted to municipalities that require receipt of a copy of all maintenance. This helps not only expedite any issues but also gives the company leverage and cost savings.

## Cleaning Frequency

Cleaning frequency for a grease trap depends on several factors, which include the grease trap design, seating capacity of the restaurant, cooking techniques and, most importantly, local sewer code. While typical cleaning frequency for a properly sized, well-maintained grease trap is three to four times a year, closer monitoring is required to meet today's demands.

One of the biggest problems is ensuring that the restaurant and the corporate office understand that grease traps and grease interceptors become less effective when they exceed 25 percent solids and FOG total.

When a trap/interceptor has more than 25 percent solids and FOG, the frequency of pumping should be increased to reduce the operational time between cleaning. For example, if you are currently pumping three times a year, you should try quarterly.

When grease trap/interceptors exceed 25 percent solids and FOG, the risk of backups and buildup of FOG and solids in the lines increases exponentially. As a result, what may have started as an effort to reduce costs ends up costing a location more money due to overflows, extra services and violations.

New grease monitoring systems can be used to help monitor the grease, oil and sediment levels in your tank with the push of a button. While these require additional upfront costs to the mechanical system, they may result in savings if monitoring eliminates unnecessary pumping. Keep in mind that you then have to maintain the proper functioning of the monitoring system or you could inadvertently be relying on a false sense of security versus a time-tested pump-out schedule.

It's not just about the frequency of cleaning, however. How thoroughly your trap is cleaned is just as important. The trap must be fully cleaned—completely drained and scraped with all solids and grease removed, not just a partial pumping that leaves your trap dirtier over time with more buildup.

Johnson of Cotton Patch Café explained that the scope of work she uses with grease management vendors includes very specific details, such as fully pumping the trap down, cleaning the walls and inspecting both the trap and the internal baffles for small cracks. "You want to know your vendor has your back and will catch any issues before something big happens," she said.

## The Grease Disposal Process

At a bare minimum, you need to know where and how your vendor disposes of the grease to ensure EPA compliance. This, as with every step of the process, must be documented. You should have a signed manifest upon the departure from your location. Then once the material arrives at a disposal site, you should receive a manifest indicating proper disposal. Partner with vendors that select

environmentally friendly disposal sites and maintain the documentation required to minimize your risk.

With continued efforts to “go green” and honor the triple bottom line, there are more and more uses for recycled waste vegetable oils cleaned from your grease trap. They can be converted into green products such as biodiesel fuel and hydraulic oil. If appropriate for your business, consider vendors that offer a recycling option.

### The People Factor

Grease and solids that never make it into your drain don't need to be pumped out. The first line of defense in grease management is reducing the solids that make it into your wastewater stream in the first place. With the high turnover often experienced by large restaurant chains, consistent on-the-job practices can often be a sticking point.

Training restaurant employees on best practices, such as disposing of all solids in the trash versus the drain, can go a long way toward reducing the costs and headaches associated with managing your grease. Stopping debris from going down the drain means less chances of clogs and overflows. At Cotton Patch Café, Johnson says proper training is a priority for just this reason. A successful piece of their training includes assigning lead responsibility for a specific grease management task to only one person per shift. This helps employees take ownership of the task, which means they step up to ensure it is done correctly.

Other small steps you can take include the use of lockable drains that cannot be removed without a tool. This deters employees looking for a short cut or feeling overwhelmed during a mealtime rush of disposing of solids into the drains.

While this sounds like common sense, remember that common sense is not always common practice, particularly with a distributed workforce.

### New Grease Management Technologies

New innovations, such as bioaugmentation of FOG using enzymes and bacteria, may one day greatly reduce or eliminate the need to pump at all. Other innovations, such as advanced grease interceptor systems, offer alternative hardware solutions to the traditional grease traps. Yet, some practical challenges exist before grease traps will reach extinction, if ever.

The first major challenge is the role that temperature plays in the effectiveness of the bioaugmentation system. Enzyme activity increases as temperature increases, which in turn increases the rate of the reaction. This also means activity decreases at colder temperatures. All enzymes are active within a specific range of temperatures, but there are certain temperatures in which they work optimally. For facilities in climates with seasonal temperature variations, this can make implementation of these technologies impractical or increase variability beyond desired risk tolerance.

Another major challenge is the approval and acceptance of these technologies by municipalities looking to reduce downstream waste issues. The widespread question is often, “Do these new technologies simply move the FOG problem further down the wastewater stream?” Any hint of truth to that statement makes municipalities

wary of shouldering even more risk in an increasingly scrutinized world of environmental protection. It will take time and collaboration between innovative vendors and regulatory agencies, combined with proven use in the field, to determine the direction these solutions take in the long-term.

Currently, your best practice is to contact your local municipality to see if they have any regulations when it comes to using enzymes down the drains. Some municipalities can readily provide a list of companies that they have been vetted and approved. Unfortunately these regulations are done at a local level, which makes consistency of application across multiple locations more challenging. Let's take the state of New Jersey as an example. There are currently 565 municipalities in the state. Of those, four have specific mandates that range from prohibited to allowed to required.

When added to frequency mandates, New Jersey Pollutant Discharge Elimination System requirements, and local plumbing codes, grease disposal quickly becomes a complex maze for facility managers tasked with overseeing multiple locations in multiple cities. Add locations in additional states, and compliance becomes exponentially more challenging. Full-service companies that can perform the risk analysis, maintenance and documentation diligence can help you navigate these challenges more confidently.

### Manage Your Risk

If there were a "cheat-sheet" for keeping grease management top of mind, it would be to know the following information each and every day you are in operation:

- 1) The percentage of solids in your grease trap as compared to the volume of the trap
- 2) When and how all preventive maintenance, cleaning and pumping is performed
- 3) Where to find full documentation and an end-to-end manifest of all service performed, any violations received and documentation of rectifying any inspection shortcomings
- 4) The detailed compliance requirements of each municipality in which you have a facility
- 5) Where your vendor disposes of grease removed from your facility and how/where it is documented
- 6) Detailed procedures your vendor follows when servicing the trap (exactly how is it cleaned and what is inspected)
- 7) Who in each facility is responsible for ensuring solids are not disposed of in the drains

The complexities of grease management, combined with changing regulations and new technologies, mean that grease management, by its very nature, can feel more like multiple shades of gray than black-and-white compliance. As a result, it is critical that you work with a vendor that can deliver on a robust scope of work and meet the demands of documentation, all while maintaining an overall risk

management perspective for your company. Sometimes all it takes is reallocating your current maintenance budget in an eco-friendlier and profitable way.

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