

KUB's Grease Program – Grease Traps/Interceptors

Why does KUB's Grease Control Program exist and why must food service facilities comply with its requirements?

Fats, oils and grease can come from cooking and preparing a variety of foods and are commonly discharged to the wastewater system. Over time they buildup in sewer pipes, eventually causing in a blockage. Grease blockages cause a variety of problems like sewage backups in buildings, rancid odors and sewer system overflows. In addition overflows from the wastewater system pose a significant public health concern and are a potential threat to our environment because of the sewage that is released.

Grease related blockages in sewer mains are a primary cause of sanitary sewer overflows in cities across the nation, and the EPA has required wastewater systems to implement Grease Control Program requirements to prevent overflows.

KUB was mandated by a federal Consent Decree in 2004 to eliminate sanitary sewer overflows. One of the Consent Decree requirements included implementing a Grease Control Program to reduce grease related overflows in our community. KUB implemented its Grease Control Program in 2005.

Each year KUB cleans between 150-200 miles of sewer mains to prevent blockage related overflows and remove the buildup of any grease in our wastewater system that results from the preparation of food.

Food services facilities produce a significant amount of grease each day as they prepare and cook food for large numbers of customers. Much more grease than results from residential kitchens. For this reason the Grease Control Program requires all food service facilities to have and maintain adequately sized grease control equipment to prevent the grease generated by the business from coming into the wastewater system.

Why does KUB appear to be enforcing these program requirements now?

When the program was implemented in 2005, KUB did not require all the businesses in its service area to replace existing equipment even if it was undersized. This would have been very costly for all restaurants and food service businesses and impossible to manage. Instead we began the implementation with new businesses, requiring them to install equipment that would effectively control their grease and be in compliance with this regulatory program.

Over time KUB has continued to require food service facilities across our service area to come into compliance with the program placing priority on those facilities that have the greatest potential to release greasy wastewater to our sewer system. Each year we inspect and permit these businesses and provide them the same information about the program's equipment and maintenance requirements. KUB's Grease Program has never allowed "grandfathering." The requirements are not new, and existing facilities have had to increase the size of their equipment when certain conditions occur.

KUB's Grease Control Program requires any business to come up to existing program equipment standards when one of three conditions is discovered. If food service facilities remodel or change their operation it is a good time to evaluate the food operation and determine the type of equipment needed. Thus, KUB expects facilities to come into compliance during the change. Secondly, if a facility fails to clean and maintain its existing equipment to control grease, it can be required to install larger equipment typically a grease interceptor, which is more effective. Finally, if KUB finds evidence of grease in the sewer mains downstream of the facility during sewer maintenance or improvements, KUB will evaluate the size of the grease control equipment in those facilities upstream to be sure sizing is appropriate.

An investigation of odors and sewer related problems in summer of 2013 in the Market Square area showed that fats, oils and grease were becoming a problem in the sewer mains. Over the last 18 months KUB has been inspecting and communicating with restaurants in the downtown area about the problems associated with grease and the need to upgrade any undersized equipment. KUB recognizes the upgrade can be a significant cost of doing business, so in all cases we have worked with facilities on the implementation schedule as long as they appear to be working toward a solution.

What is KUB doing to control grease and why is the cost of grease control the burden of the food service facility?

KUB is continually televising and cleaning its wastewater system to prevent blockage related overflows. Each year KUB cleans an average of 200 miles of sewer mains to remove the buildup of any grease in our wastewater system. This effort helps us prevent overflows.

Even though KUB is working to remove grease to prevent blockages, KUB must require facilities that produce the grease to manage it rather than add more of this burden to customers who do not discharge significant amounts of grease. This approach is consistent with what other wastewater utilities across the nation are doing. It is not unique to KUB's program requirements.

Explain what a grease interceptor is and its purpose in restaurants.

KUB and our community are not unique in addressing the problems related to grease and the impact it can have on the wastewater system. Although each food service facility (FSF) can be somewhat unique, generally grease traps/interceptors prove to be the most effective way to address the issue.

KUB's goal is to prevent grease from entering into the KUB sanitary sewer collection system. This goal is achieved through the Grease Control Program and routine sanitary sewer collection system maintenance.

As part of the Grease Control Program, KUB requires all food service facilities (FSF) inside KUB's wastewater service area to install and properly use/maintain a grease trap or interceptor. A properly installed and maintained grease trap or interceptor captures and disposes of the grease generated by the facility's operation. This interceptor must be the proper size for the amount of food preparation

and clean-up that occurs in the process of operation. The trap/interceptor is also a requirement of the Plumber's Code if the FSF has the potential to discharge grease into the sewer system.

Grease in pipes can cause sanitary sewer overflows (SSOs). Grease will collect on the pipe and create a blockage, which in turn will prevent wastewater from traveling through the pipes causing a back up out of an available opening (such as a manhole, or even through the internal plumbing of a structure).

Although each FSF can be somewhat unique, generally grease traps/interceptors are the most effective way of addressing the issue.

Who mandated the need for these interceptors to be installed?

Sewer overflows and aging wastewater system infrastructure are growing concerns across our nation. KUB, like many other utilities, is under a federal Consent Decree by the Environmental Protection Agency (EPA) to make system improvements. KUB addresses wastewater issues with Partners Acting for a Cleaner Environment (PACE 10).

Launched in 2004, PACE 10 addresses the strict requirements placed on KUB to improve the wastewater system and address sanitary sewer overflows (SSOs).

PACE 10 is a \$530 million, ten-year initiative to improve the wastewater system in the KUB service territory, a system that serves more than 68,000 residential and business customers, covers 248 square miles, and has 1,320 miles of service mains (or pipes). The program works to meet increasingly strict regulatory requirements through a mix of ongoing maintenance programs, replacement and rehabilitation projects, and wet weather wastewater storage. Projects are under way throughout Knoxville and Knox County.

KUB's Grease Control Program is aimed at non-residential customers that process food or cook. Customers in this category must follow guidelines regarding disposal of grease waste.

KUB's Can the Grease Program is an educational program aimed at residential customers that provides information on properly disposing of grease in a home setting. Grease does not belong in the sewer pipes, no matter the location.

What is the cost?

KUB works with each FSF to determine what is required for each business to be compliant with the Grease Control Program requirements. Following a formula set by the EPA, KUB makes recommendations to the FSF on the size and type of interceptor/trap needed to meet requirements. The FSF then works with a contractor/plumber to coordinate the installation. The cost will vary for each FSF depending on a variety of factors that can impact the installation, such as the extent of construction required for the installation, size of the interceptor/trap, number of dishwashers, and contractor/plumber expenses.

How do businesses learn about this program and how to comply with it?

New businesses must obtain a City of Knoxville Plumbing Permit and have plans approved before starting up. This process results in KUB being contacted about the potential new food service facility, and KUB will contact the owner with information about the program. The City also has an informative Business guide that includes information about KUB's Grease Control Program requirements.

KUB has been working with existing food service facilities in its wastewater service territory since 2005. Every year, all FSFs sign papers with KUB to acknowledge KUB's Grease Control Program and indicate their intent to comply with regulations. Inspectors also provide information about the program during inspections. While KUB is requiring FSF's to have the proper grease traps/interceptors, KUB will work with each FSF to find solutions to the unique problems downtown businesses face. KUB will then work with the business to find a mutually agreeable construction schedule so the FSF has adequate time to prepare for the installation.

Many businesses are in smaller, older structures where space is often an issue. There are solutions to this issue which many of the downtown and Market Square restaurants have implemented successfully. In some cases, the facilities have already worked with their plumbers or maintenance personnel to achieve compliance in unique ways and places.