

Lift station with little to no grease buildup on floats or walls

The Impact of FOG, Otherwise Known as Fat, Oil and Grease

Controlling discharge of fat, oil and grease (FOG) into the sanitary sewer collection system will help reduce clogs that can cause sanitary sewer overflows (SSO) into streets, yards and even into homes and businesses. According to the city of Lawrence, Kansas' Web site, under FAQ's: Question: Does it really make a difference if I pour just a little grease down the drain? Answer: Yes! If every

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Answer: Yes!**

person in Lawrence poured just one teaspoon of FOG down the drain, it would be the equivalent of dumping more than two 55-gallon drums of FOG into the sewer (based on population of 90,000). Every little bit adds up to create big clogs that cause spills and overflows. In fact, in the past three years, 90 percent of FOG-related overflows occurred in residential lines, according to the Lawrence Web site.

Transfer this above information to any other system. It ends up being equal to one gallon of FOG per every 818 persons. Now, calculate the amount of FOG on an annual basis. The need to have a FOG program and ordinances, but more importantly, continued enforcement of the FOG programs and ordinances, soon becomes evident.

As I travel to various wastewater systems across Kansas, operators frequently ask me what they should be using to control grease in lift stations. Well, the best answer is to control the discharge of the FOG into the collection system by users. Perhaps contact a wastewater system nearby to see what works best for them. There are many products on the market and some work



Not to worry, this is just a demonstration using a teaspoon of water; it's not oil!

very well. Others are less effective; it depends on amounts and proper use by following recommended dosages of the product.

Recycling presents options

With recycling becoming more prevalent as well as reuse of cooking oils, I found there are at least nine service providers in Kansas that to collect used cooking oil for recycling. I located these by searching online under “Kansas used cooking oil”. The charges vary such as a small, one-time set up fee such as \$50 for a container to restaurants. Others may be more costly and others may even be without charge. Depending on the market and location of the pick up, the service provider may pay for the oil or pick up at no cost to customers or for a small cost. Larger towns may provide the names and numbers of service providers who collect the used FOG as there are more service providers available. In smaller systems and rural areas it may be more difficult to locate services that collect FOG. In some areas, FOG may be taken to hazardous waste collection facilities. Just be sure to confirm they will accept FOG; not all such facilities will accept it. I contacted one provider and learned that the firm recycles the used cooking oil for use as protein for animal feed and biodiesel. They also provide service to clean grease traps, which I know can cause problems with collection systems and service lines when not cleaned on a routine basis.

Most wastewater systems have a sewer use ordinance in place. The ordinance should include mention of materials not allowed to be discharged into the sanitary sewer collection system. The description may be just one paragraph; some ordinances may have entire sections containing great detail about FOG. KRWA provides a model sewer use ordinance on its Web site. You can find this at www.krwa.net, then under “Technical Assistance” and then under “Downloads”. Scroll to the model sewer use ordinance.



Container for used cooking oil provided by a service company to a local restaurant.

In the model, see Article V, Section 4(b): Any water or wastes containing fats, wax, grease or oils, whether emulsified or not, in excess of one hundred (100) mg/l or containing substances which may solidify or become viscous at temperatures between thirty-two (32) and one hundred fifty (150F) (0 and 65C). The Kansas League of Municipalities also provides examples of ordinances.

More detailed information about Fat, Oil and Grease can be found; check EPA’s *National Pretreatment Program Bulletin EPA-833-f-07-007*. I found it by searching National Pretreatment Program-Controlling fats, oil and grease. Also check the city of Lawrence’s Web site: <https://lawrenceks.org/utilities/fog>. Both sites have a tremendous amount of information.



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Used cooking oil saved for proper disposal.

Don't miss these sessions at the conference

I want to encourage readers to attend the 46th Annual KRWA Conference & Exhibition, March 26 – 28 at the Century II Convention Center in Wichita. There are eight concurrent preconference sessions on March 26 and 48 additional breakout sessions the following days. And shopping in the 309 exhibit booths is the most efficient way ever to see new products and services and meet their representatives. I think attending the KRWA conference is one of the best investments that cities and RWDs can make. Look for these sessions:

Tuesday, 3/26:

- Solving Infiltration & Inflow In

- Wastewater Systems, a 5 hour training session

Wednesday, 3/27:

- Troubleshooting Lift Stations – The Simple Way
- Nutrient Removal: Challenges For Wastewater Utilities
- Lyons Sewer Main Capital Improvement Plan
- Six Common Causes For Poor Effluent Quality In Lagoons

Thursday, 3/28

- Wastewater Operator Forum – Refresher Course
- Using Single-Phase Generators To Operator Three-Phase Units
- Evolving Capabilities Of Automatic Control Valves



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