

Fats, Oils and Grease

By David Branham, Wastewater Technician

- ✓ Shortening
- ✓ Meat fat

As I travel about our beautiful state, the two most often asked questions I receive are; how do I treat and/or get rid of Duckweed and what should, and can, be done about **Fats, Oils and Grease (FOG)** that are coming via the wastewater stream.

As many of you know well, **Fats, Oils and Greases** can, and do cause havoc on sewers, lift stations and of course, your wastewater facility. Grease as a warm liquid may not appear harmful. But as the liquid cools, the grease or fat congeals and causes nauseous looking mats on the surface of settling tanks, digesters, and the interior of pipes and other surfaces which may cause shutdown of wastewater treatment units. They also can cause sewer overflows and backups bringing about health hazards, as well as damaging homes and threatening the environment.

Fats, Oils and Greases can enter the sewer from household drains as well as from poor, or more often the case, lack of grease traps in restaurants, schools, daycare facilities, long term care centers and various other points of entry.

Two types of **FOG** pollutants are common to wastewater systems. Petroleum-based oil and grease (non-polar concentrations) occur at businesses using oil and grease, and can usually be identified and regulated by municipalities through local limits and associated pretreatment permit conditions. Animal and vegetable-based oil and grease (polar concentrations) are more difficult to regulate due to the large number of restaurants and fast-food outlets in every community.

One of the first things to look for when experiencing this problem is: "Where is the grease coming from?" Most grease is a byproduct of cooking: the list below defines where most of the grease and oil comes from.

- ✓ Dairy products
- ✓ Lard
- ✓ Cooking oil
- ✓ Butter/margarine
- ✓ Food scraps
- ✓ Baking goods

Many times, grease is washed into the plumbing system unknowingly and thus sticks to the sewer lines, both on the customer's property as well as the city sewer mains. Over time, the grease and oils can and will build up and block the lines, pump stations and catch basins.

Smaller communities lack the manpower and/or money to have any type of a pretreatment program. So my recommendation to these systems is to establish a community awareness program about grease and oil. One way to do this is to insert information, about **FOG**, in the city water/wastewater billing. Another way to reach the public would be to share the following in a local newspaper.

Put oil and grease in covered collection containers

- ✓ Restaurants use commercial disposal.
- ✓ Private homes use empty containers and cover with a lid.

Scrape food scraps from dishes into a trash can lined with a garbage bag and dispose of properly.

When you generate any amount of cooking oil, reuse it as often as possible and then pour it into a container that can be thrown away.

Never, I repeat never, pour it down the drain.

Remove oil and grease from dishes, pans, fryers and griddles. Cool first, then skim, scrape, or wipe off grease.

Pre-wash dishes and pans before putting them into the dishwasher – this not only keeps the food from being ground and sent into the sewer lines but also prolongs the life of your dishwasher.

Cover kitchen sink with catch basket and empty into garbage as needed.

If you generate large amounts of used cooking oil, reuse or recycle it.

As I stated earlier, many larger cities have ordinances, which require grease traps if enough grease and oil is accumulated, and it is a good idea

to have the trap located outside with easy access for the recycler to access it.

For any establishments that are cooking food, it is in my opinion, that a grease trap be utilized and the following list should be considered as important factors.

- ✓ Proper sizing of the grease trap for the application.
- ✓ Proper installation - it should be level and vented.
- ✓ Proper cleaning of the trap, including a schedule of cleaning and servicing on a frequent basis.

Let me add a note about a couple of other areas that can help keep the collection lines (whether in your sewer line or the municipalities) free of obstacles and damage. Use environmentally safe-cleaning products instead of harsh detergents or cleaners that can damage sewer lines. And lastly, I would like to bring up the subject of floor drains. Many times these are installed in basement and/or garage floors. Make sure to cover floor drains with a fine screen and empty it into the garbage as needed.

In conclusion, I believe that community awareness on all levels, businesses, schools, and residential is the key to making your job easier and safer, not to mention, can help alleviate the problem of **FOG**. Have a safe and productive summer.