

Fats, Oils, & Grease Control Program

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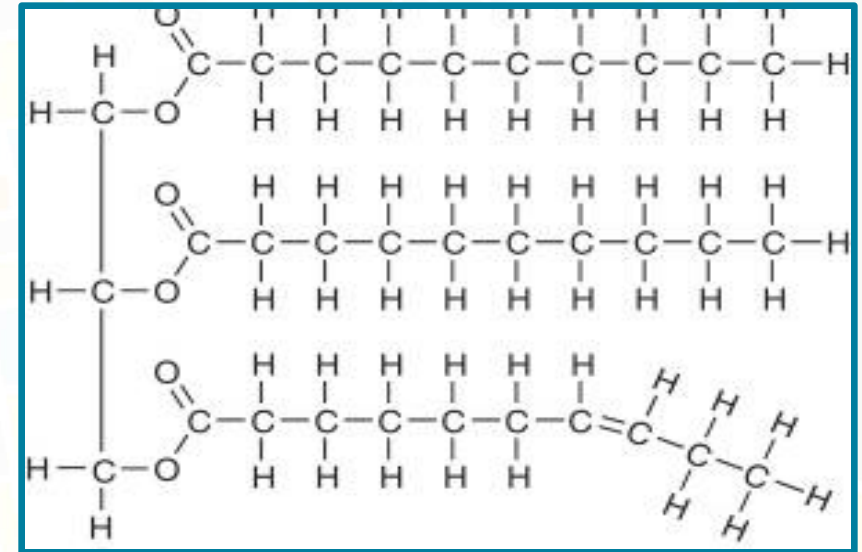
An Important Notice on Fats, Oils, & Grease (FOG)

- The City of Lancaster needs your help to keep our waterways and streets clean from FOG.
- Fats, oils, and grease build up in our City's sewer system and causes blockages as they coagulate; blockages can result in sanitary sewer overflows that pollute the environment and damage properties.
- **FACT: Fats, oils, and grease are the No. 1 cause of sewer backups in homes.**



What are Fats, Oils, & Grease?

- Fats, oils and grease (FOG) that are used to aid in the preparation of food (deep fryer fat) or that are produced during the preparation of food (bacon grease).
- Organic nonpolar compounds derived from vegetable/plant or animal sources that are composed of long chain triglycerides



Where do Fats, Oils, & Grease come from?

- ***Fats, oils, and grease (FOG) come from:***
 - meat fats in food scraps
 - cooking oil
 - shortening
 - lard
 - butter and margarine
 - gravy
 - mayonnaise
 - salad dressings
 - sour cream



Who Generates Fats, Oils, & Grease?

- Commercial: Restaurants, Malls, Laundromats, Butchers, Sports Complexes, Supermarkets, Linen Services, Amusement Parks, Convention Centers, Hotels, Bakeries, Doughnut Shops
- Residential - Cooking, Dishwashing
- Government - Cafeterias, Schools,
- Offices, Military Installations, Prisons



The Two Categories of FOG: Yellow Grease & Brown Grease

• Yellow Grease

- Inedible oil and grease that has not been changed during the food preparation process (i.e. deep fryer oil).
- This type of grease can be used by the rendering industry.
- Disposed of in the grease recycle bins.



• Brown Grease

- Floatable FOG and settled solids that are recovered from grease traps and interceptors.
- This type of grease is more difficult to reuse.
- Retained in grease receptors and grease traps.

Why We Need to Keep Fats, Oils, and Grease out of the Sewer System

- FOG poured down kitchen drains accumulates inside sewer pipes. As the FOG builds up, it restricts the flow in the pipe and can cause untreated wastewater to back up into homes and businesses, resulting in high costs for cleanup and restoration.



Why We Need to Keep Fats, Oils, and Grease out of the Sewer System.....

- Manholes can overflow into parks, yards, streets, and storm drains, allowing FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public-health hazard.



Why We Need to Keep Fats, Oils, and Grease out of the Sewer System.....

- FOG discharged into septic systems and drain fields can cause malfunctions, resulting in more frequent tank pump-outs and other expenses.
- Communities spend billions of dollars every year unplugging or replacing grease-blocked pipes, repairing pump stations, and cleaning up costly and illegal wastewater spills. Excessive FOG in the sewer system can affect local wastewater rates.
- **So, keeping FOG out of the sewer system helps everyone in the community.**

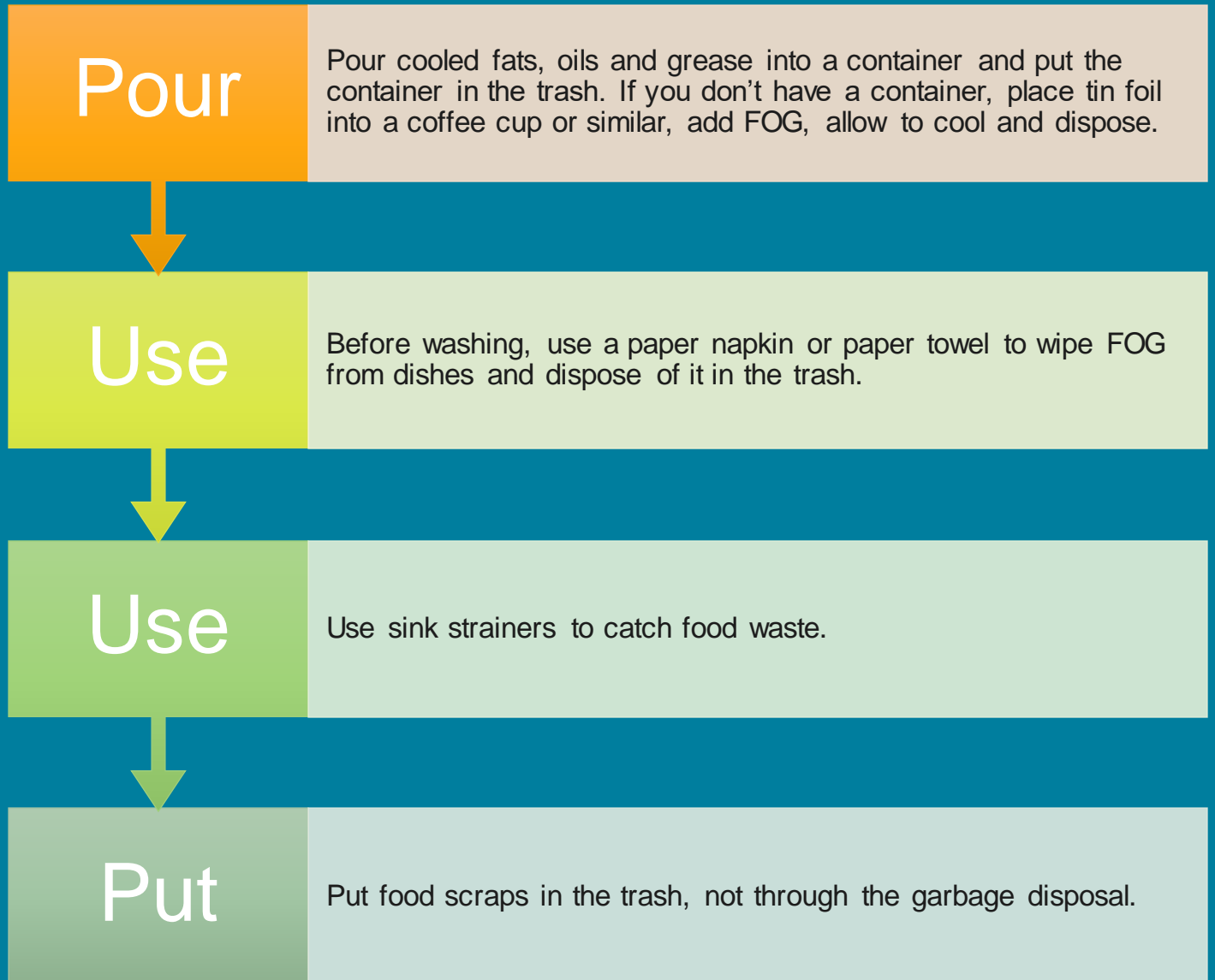


What can I do to keep Fats, Oils, & Grease Out of the Sewer System?

- Do not pour fats, oils, and grease down the drain. This is the most important thing you can do to prevent them from entering the sewer system because the fats, oils, and grease poured down kitchen drains accumulate inside sewer pipes.
- As these substances build up, they restrict the flow in the pipe and can cause untreated wastewater to back up onto streets, parks, and rivers.



What can I do to Keep Fats, Oils, & Grease Out of the Sewer System?....



How can I reduce Fats, Oils, & Grease in my commercial kitchen?

- Put oil and grease in covered collection containers.
- Scrape food scraps from dishes into trash cans and garbage bags and dispose of them properly. Avoid using the disposal/food grinder and make sure scraps get put in the garbage instead.
- Remove oil and grease from dishes, pans, fryers and griddles. Remember: let it cool first before you skim, scrape or wipe off excess grease.



How can I reduce Fats, Oils, & Grease in my commercial kitchen?....

- Rinse dishes with cold water before putting them in the dishwasher.
- Cover kitchen sinks with catch baskets and empty into the garbage can as needed.
- Cover each floor drain with a fine screen and empty the screen into the garbage can as needed.
- Use Kitchen best management practices, such as those provided by the City FOG inspector.



How can I reduce Fats, Oils, & Grease in my commercial kitchen?....

- **Clean grease traps regularly.** Any sink or floor drains that might take in oil should be connected to a grease trap or grease separation device.
- **Locate and manage grease bins appropriately.** Place outdoor grease bins in well-lit areas and within a reasonable distance of the kitchen door to ensure that employees can safely and easily access them.
- **Train employees.** Talk to staff about proper F.O.G. management and the damaging effects that poor management has on the environment and bottom line of the business.
- **Help prevent FOG pollution by educating others** on the threat it poses to streams, rivers, lakes, and oceans.

How is FOG Harmful to the Environment?

Because FOG causes Combined Sewer Overflows and Sanitary Sewer Overflows.

- Fats, oils, and grease can solidify and accumulate around the insides of underground sewer pipes. This can lead to blockages, backups, pipe bursts, and overflows.
- When sewer malfunctions occur, raw sewage directly enters the environment untreated and ultimately makes its way into streams, rivers, lakes, and oceans.
- This raw sewage carries excess nutrients as well as bacteria and other disease-causing pathogens that have a negative impact on human health, fish, and wildlife.



How is FOG Harmful to the Wastewater Treatment Plan?

- Once FOG reaches the wastewater treatment plant, it can cause further issues.
- Grease is more difficult to biologically degrade than other common components of municipal sewage.
- Moreover, FOG can congeal and form deposits on the surface of
 - settling tanks
 - digesters
 - pipes
 - pumps and sensors



How is FOG Harmful to the Wastewater Treatment Plan?

- Grease may also partially block screens and trickle filter systems,
- Grease may clog sludge pumps and in large volumes,
- inhibit the activity of sludge digesting micro-organisms.
- Other problems include:
 - excessive foaming
 - increased sludge volume and
 - issues with floc forming bacteria



Pretreatment at the Source

- **Pretreatment**
 - greatly reduces the cost and discharge of grease into sewer lines
 - prevent blockages that impact CSOs and SSOs, which cause public health and water quality problems
- A lack of pretreatment could lead to:
 - High BOD levels
 - High COD levels
 - High Grease and Oil levels
 - Increased operating costs
 - Clogged collection systems



Why have a Fats, Oils, & Grease Program?



Prevent blockages that impact Combined Sewer Overflows and Sanitary Sewer Overflows



Sewer line cleaning, repair & replacement costs



Sewer pumping station equipment & maintenance impacts



WWTP equipment & maintenance impacts



WWTP costs



Odors & contribution to hydrogen sulfide generation

An Important Notice Regarding Fats, Oils, & Grease (FOG)

- By following just a few simple clean-up measures while cooking, you can help eliminate unwanted grease.
- Your efforts will greatly help to reduce sewer maintenance and operation expenses as well as reduce the public health risks associated with sanitary overflows.
- Remember that every household plays an important role in preventing neighborhood sewer blockages.





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