

F.R.O.G

Dan Dyer

Environmental Compliance Inspector

What is F.R.O.G.?

F = Fats

R = Roots

O = Oil

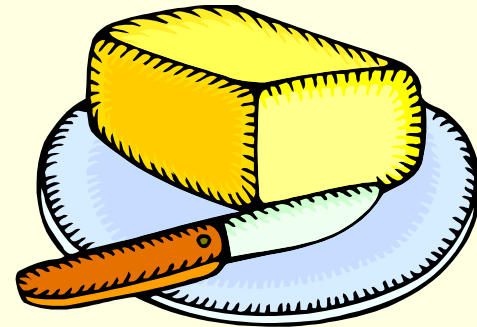
G = Grease



In San Clemente we refer to these Fats, Roots, Oil, and Grease as Frog

Where does F.O.G. (F.R.O.G.) come from?

- F.O.G. is the term in the industry given to Fats, Oils, and Grease used in food processing and in preparation of meals; it is FROG minus the Roots
- Examples of FOG bearing materials, among others, include:
 - Cooking Oil
 - Fat
 - Lard
 - Grease
 - Butter
 - Tallow
 - Shortening and Margarine



Where does F.O.G. (F.R.O.G.) come from (cont.)?

- Kitchen waste containing these materials, as well as water that has been used to wash kitchen equipment and floors contains waste FOG

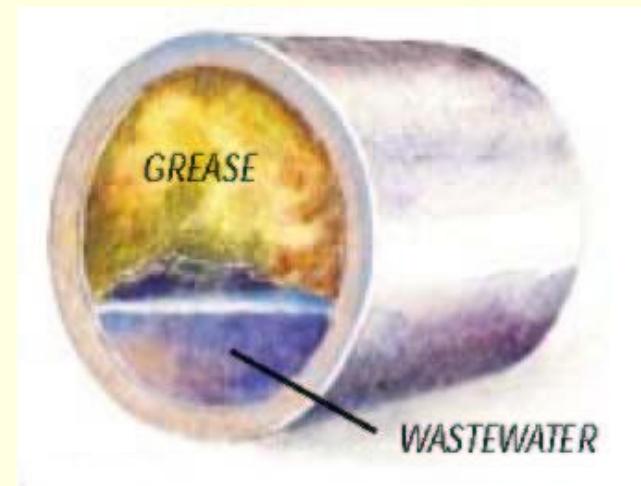


- F.O.G is **Hydro-Phobic**

- Fats oils and greases are insoluble in water with enough hot water and soap grease seems to melt/dissolve in the sink only to harden later in the sewer adhering to sewer pipes and equipment

Results of F.O.G.

- **SSO**, short for Sanitary Sewer Overflow
- **SSO's** are a threat to health, safety and welfare of the public
- **SSO's** cause endangerment to the environment (beach closures, wildlife exposure, danger to our health)
- **SSO's** cleanup cost Cities many thousands of dollars



Results of F.O.G.



How do you identify a Sewer Spill?

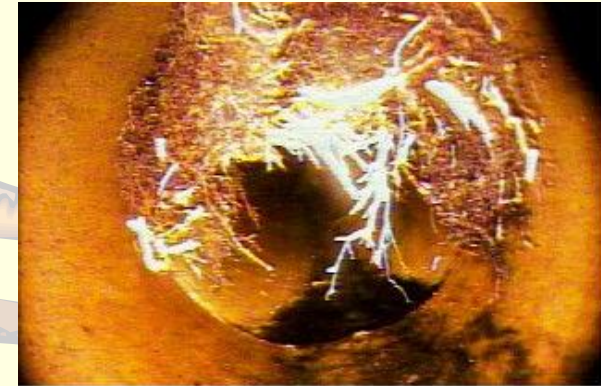
- Drains backing up inside the building
- Wet ground and water leaking around manhole lids on your street like we just saw in the pictures
- Seeping water from service lateral clean outs and outside drains
- Unusual odorous wet areas such as sidewalks, external walls, ground and or landscape around the building



Other common causes of Sewer Spill

■ **Roots!** The “R” in our F.R.O.G.

- Roots enter the pipes the sewer is a rich source of nutrients and moisture
- Structure problems can result from roots in the sewer lines
- Roots grow and expand in the sewer eventually blocking the line



■ **Infiltration**

- Groundwater and rainwater infiltrate the sewer system
Causes: Pipe defects or illegal connections of yard and or roof drains to the sewer
- Infiltration surcharges the sewer line exceeding its capacity causing overflows

■ **Maintenance**

- When preventative and/or corrective maintenance is performed on your service lateral, debris, such as root balls and grease are pushed from the service lateral into the public sewer, this results in an obstruction of the sewer line and can possibly result in a blockage

How you can prevent Sewer Spills

- **Sewer spills can potentially cause long term damage to the environment. You can help prevent them by:**
- Never discharging oil or grease down garbage disposals, drains, or toilets
- Perform periodic maintenance on your service lateral
- Repair structural problems on your service lateral
- Disconnect illegal connections to your service lateral including yard and roof drains
- Be selective with landscape planting materials that do not have aggressive root systems

Kitchen Best Management Practices

- Do not discharge fats, oils, or grease to sinks
- Pour spent household cooking oils and grease into containers and dispose with solid waste
- Wipe excess oil and grease from cooking pans with paper towel and dispose with solid waste (we call this “dry wipe”)
- Use drain screens; these will catch foods and solid wastes. Dispose of the solids in a plastic garbage bag
- **Notify the city immediately if you witness a sewer spill
Call (949)-366-1553 24 hours a day.**



Help keep our Water clean

- If everyone pitches in we can reduce the number of sewer spills, thereby reducing the amount of pollution to our waters!

