

Developing an FOG Program

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OMG! Is this what you deal with?!



Well, not entirely...

“Another SSO? Oh well, we needed something to do today!”



Sanitary sewer manhole overflow



Sewer Backups



Goal of an FOG Program

Prevent blockages, overflows (multiple benefits)

- protect human health
- protect the environment
- avoid property damage
- minimize remediation/maintenance costs
- increase operating efficiency
- make operators and workers happier!

Objectives of an FOG Program

Goal: To prevent blockages and overflows...

Minimize FOGs
entering the system



Inspect and maintain
the system



Minimize FOGs entering the system

1. Perform a system characterization study

a. Locate all FOG sources

- food service establishments (FSEs)

(restaurants, commissaries, caterers, butchers, delis, cafeterias, etc.)

- high-density residential areas

- car wash establishments

- high O&G surcharge entities

- compile list and create map

- update the list and map regularly

Minimize FOGs entering the system

1. Perform a system characterization study
 - b. Identify high-maintenance sites
 - frequent SSOs
 - frequent cleaning
 - structural weak spots
 - high-risk flow areas

Minimize FOGs entering the system

2. Regulate FOG activities

- a. Establish legal authority
- b. Regulate by permit
- c. Regulate by local ordinance

Some pros and cons...

A dual approach...

Minimize FOGs entering the system

2. Regulate FOG activities

b. By permit

- allows details on treatment, testing, discharge limits, inspections, etc.
- customize requirements based on flow, activity, location, types of FOGs, etc.
- requires more up-front and ongoing effort; easy to revise; renewals
- evaluate feasibility based on system and available resources

Minimize FOGs entering the system

2. Regulate FOG activities

c. By local ordinance

- one-source regulation
- ordinance wording can be too vague or general
- shared control with local authority
- slow approval/revision process
- less ongoing effort

Minimize FOGs entering the system

2. Regulate FOG activities

d. Require best management practices (BMPs)

- daily kitchen activities at FSEs
- solids on plates/equipment/counter → trash
- three-sink washing system, skim solids
- water temperature $\leq 140^{\circ}\text{F}$ (60°C)
- clean up small spills with paper, not towels
- clean up large spills with pads, block drain

Minimize FOGs entering the system

2. Regulate FOG activities

d. Require best management practices (BMPs)

- prevent spills, timely empty, cover, use tools
- sink drain screens, 1/8" - 3/16", basket, floor
- all FOG drains discharge to a grease removal device (GRD)
- clean mats, exhaust filters ahead of GRD
- fryer oil, bucket to outdoor drum/bin
- small container collection

Minimize FOGs entering the system

2. Regulate FOG activities

d. Require best management practices (BMPs)

- don't discharge emulsifying/bio agents
- GRD monitoring and maintenance
- employee training, initial and ongoing
- post BMPs, signage

Minimize FOGs entering the system

2. Regulate FOG activities

e. Require GRDs be installed

- interior (grease trap)

 - > retain wastewater to allow separation

 - > flow-based, cleaned regularly

- exterior (grease interceptor)

 - > cleaned by licensed contractor

 - > monitored by FSE, responsibility

Minimize FOGs entering the system

2. Regulate FOG activities

f. Implement the program

- select inspectors, informed and winsome
- train inspectors, consistent fieldwork
- prepare checklists and documents
- notify FSEs of expected requirements
- educate FSEs
- promulgate ordinance, issue permits

Minimize FOGs entering the system

2. Regulate FOG activities

g. Education (FSEs)

- on-site meeting, presentation
- review BMPs, resources, literature
- stress recordkeeping
- on-site inspections
- collaborate with broader organizations

Minimize FOGs entering the system

2. Regulate FOG activities

h. Compliance

- inspections, unannounced
- frequency based on FSE factors
- follow checklist, keep detailed records
- review training, BMPs being followed
- inspect GRDs, review records

Minimize FOGs entering the system

2. Regulate FOG activities

i. Enforcement

- must address non-compliance, tiered
- deficiency notice, re-inspect
- violation notice, certified mail, re-inspect
- levy fines per the ordinance/permit
- downgrade permit to “provisional”
- revoke permit (cease operation)

Minimize FOGs entering the system

3. Education/Outreach (public)

- inserts in sewer bills
- posters in public venues, on-door fliers
- participation in public events
- media, PSAs, website
- presentations at meetings, schools, apts.
- stickers on city vehicles, billboards

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Inspect and maintain
the system



Inspect and maintain the system

1. Inspect for problems, real and potential
 - a. System inspection
 - train inspectors
 - (grease, cracks, corrosion, roots, etc.)
 - establish a regular schedule
 - high-priority, low-priority (flow, sags, turns)
 - inspect manholes and pipes
 - visual and/or remote camera
 - maintain records!

This inspector **really**
gets into
his work!!!



Inspect and maintain the system

1. Inspect for problems, real and potential
 - b. observed grease accumulation
 - step up FOG inspections
 - schedule cleaning
 - c. observed damage
 - schedule service
 - d. centralize communication and scheduling!

Inspect and maintain the system

2. Cleaning

- regularly scheduled (prevention)
- as needed (per inspection)
- remove grease, roots (FOG accum. sites)

3. Wastewater testing

- “grab” sample, not composite
- EPA Method 1664 (HEM and SGT-HEM)

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