



Municipal Fats, Oils, & Grease Programs

Presented By:

Sam Mcleod, FOG BMP Software



Speaker's Background



Sam Mcleod

- Vice President, FOG BMP Software
- Board Member, United States Fats, Oils & Grease Alliance

FOG BMP is a software program used by municipalities across the country to manage their fats, oils, and grease programs. It is a turn-key, cloud based municipal FOG program that allows municipalities to automate and manage every aspect of their FOG programs. WWW.FOGBMP.COM.

US FOG Alliance is a non-profit organization created and designed to bring together industry professionals that have experience and expertise within the handling and management of food grade fats, oils and grease.

Learn more at WWW.USFOGA.COM



Why Everyone Needs a FOG Program

- Sewer Infrastructure Care
- Environmental Compliance
- Water Treatment Plant Efficiency
- Public Health Considerations
- Resource Allocation

Sewer Infrastructure Care

Fats, oils, & grease solidify within sewer systems and can combine with solids such as wet wipes and wreak havoc within your sewers and lift stations.



Environmental Compliance

FOG can have devastating impacts on the local environment. Storm sewers must be protected and proper disposal of FOG must be tracked to prevent negative ecological impacts.



Water Treatment Plant Efficiency

FOG can cause major issues for water treatment facilities. The primary reasons for this is because the FOG tends to adhere and coat surfaces. This can impact filtration, biological treatments, and pumping equipment within these facilities.



Public Health Considerations

FOG blockages are the leading cause of sanitary sewer overflows in the United States. This is the major reason why the EPA gets involved with FOG regulations. The EPA can also take legal action and issue a Consent Decree on municipalities not controlling their FOG program properly.



Resource Allocation

FOG can cause catastrophic damage and require significant resources to conduct repairs on infrastructure. By utilizing a small amount of resources and being proactive, you can avoid expending major resources at a high cost.



Main Components of a FOG Program

- Profiling FOG Generators
- Cleaning Record Submission
- On Site Inspections
- FOG Generator Compliance Resources
- Municipal Oversight
- Sewer Overflow Tracking

Profiling FOG Generators

Profiling FOG generating facilities is a crucial step in creating/operating an effective FOG program. Generally, this is an area where many FOG programs come up short. There are several methods that can be used to gather data and create profiles.

- Request data be submitted by pumping companies
- On site inspections
- Mailers
- Connect the profiling requirement to their discharge permit/food service permit

Facility	McDonald's
Address	123 Main Street Indianapolis, Indiana
Phone	(555)-345-6789
Contact	John Doe
Grease Trap	1,500 Gallon
Pumping Company	Indy Pumpers LLC
Frequency	Quarterly

Cleaning Record/Log Submission

Cleaning records and cleaning logs need to be tracked in order to ensure compliance from FOG generating facilities and waste haulers. There is a high variance in the requirements for documentation across North America.

Lowest: Don't require pumping

Low: Require Pumping but no follow up

Mid Range: Facilities required to keep hand written log (often forged)

High: Regular pumping required and cleaning records submitted

Very High: Regular pumping required, cleaning records submitted, fines issued for missed cleanings

GREASE INTERCEPTOR CLEANING LOG		
RETAIN RECORD(S) IN A PERMANENT LOG BOOK FOR A MINIMUM OF 3 YEARS SEPARATE LOG(S) MUST BE MAINTAINED FOR EACH GREASE INTERCEPTOR		
Date Cleaned	Gallons or Percent of Grease and Solids Removed	Grease Interceptor Condition Mark satisfactory or unsatisfactory (If unsatisfactory, indicate corrective actions)
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____
6. _____	_____	_____
7. _____	_____	_____
8. _____	_____	_____

On Site Inspections

FOG inspections should be conducted on a regular basis to ensure facilities don't have small problems that can turn into larger problems downstream. An inspection is normally a good time to check the following.

- Grease Removal Device
- Outdoor Grease Recycle Bin
- Kitchen Equipment
- Best Management Practices



FOG Generator Compliance Resources

Providing resources to facilities is often overlooked. Simply putting demands on facilities to comply without providing tools has been proven ineffective. The following are some examples of resources provided.

- Kitchen Staff Training
- Kitchen Signage
- Checklists
- Best Management Plan Template
- Equipment (Scrapers, Grease Containers, Spill Kits, etc...)



Municipal Oversight

Oversight is crucial when operating an effective FOG Program. Municipalities need the ability to ensure that both waste haulers and FOG generating facilities are following rules and regulations. There are several factors that play into Municipal Oversight.

- Cleaning Record Submission
- Waste Hauler Database/License Renewal
- Inspections/Notices of Violation
- Facility Contacts
- Communication Channels



Sewer Overflow Documentation

Tracking sewer overflows are vital to operating a FOG program. A municipality must have the ability to respond to sewer overflows, document the event, and submit required paperwork to the environmental authority having jurisdiction. These authorities are normally the state and or federal environmental agencies.

A FOG program should have the following in place.

- Sewer Overflow Response Plan
- Sewer Overflow Documentation
- Required Environmental Agency Reports
- Mapping and Hot Spot Tracking

Waste Haulers

- Cleaning Record Submission
- Jurisdiction Requirements
- Preferred/Licensed Haulers Lists
- Haulers Responsibility/Expectations



Cleaning Record Submission

Ensuring cleaning records are kept and accounted for is arguably the most important aspect of a FOG program. This can be done multiple ways with varying degree of detail.

- Waste haulers can leave the records with the facility and the facility can create a log.
- Waste haulers can scan copies of cleaning records to municipalities.
- Facilities can provide municipalities with cleaning records upon request.
- Cleaning records can be input to a shared online platform that allows all stakeholders access to cleaning records and cleaning logs.

Jurisdiction Requirements

Municipalities can decide what kind of requirements they will enforce within their FOG program when it comes to requirements of waste haulers. There is a wide range of requirements throughout North America. Some common requirements are listed below.

- Simply require that the device has been cleaned and want no other details.
- Require the solids depth and oil layer depth to be reported (used to calculate frequency).
- Require the entire contents of the tank to be removed.
- Require the walls to be scrapped and solid build up removed.
- Require before cleaning and after cleaning photos.

Preferred/Licensed Haulers Lists

It is common for municipalities to develop a list of waste haulers that they recommend to facilities who need to be serviced. There are several ways to develop and track the list.

- Reach out to haulers servicing facilities within your jurisdiction and provide them your list of criteria that you will be requiring. Those who acknowledge and agree can be added to your list.
- When conducting FOG inspections, examine the grease trap and ensure the hauler is meeting your requirements. If they are not, you can remove them from list.
- Provide a link to facilities for all licensed waste haulers within your county/state.
- Make it clear to haulers that if they don't want to meet your requirements, there are plenty of other haulers who will.

Haulers Responsibility/Expectations

Depending on what department within the municipality manages the FOG program, it will determine how much leverage is ultimately available to enforce requirements. Determining what is expected from the waste hauler will vary greatly throughout North America.

A good way of getting off to a good start with your waste haulers is establishing communication and explaining to them that the municipality is requiring stricter scheduled cleanings. Therefore it could ultimately be better business for them.

Generally well established ethical waste hauling companies have no issue meeting municipal expectations. Sometimes municipalities have to filter out the non compliant waste haulers.

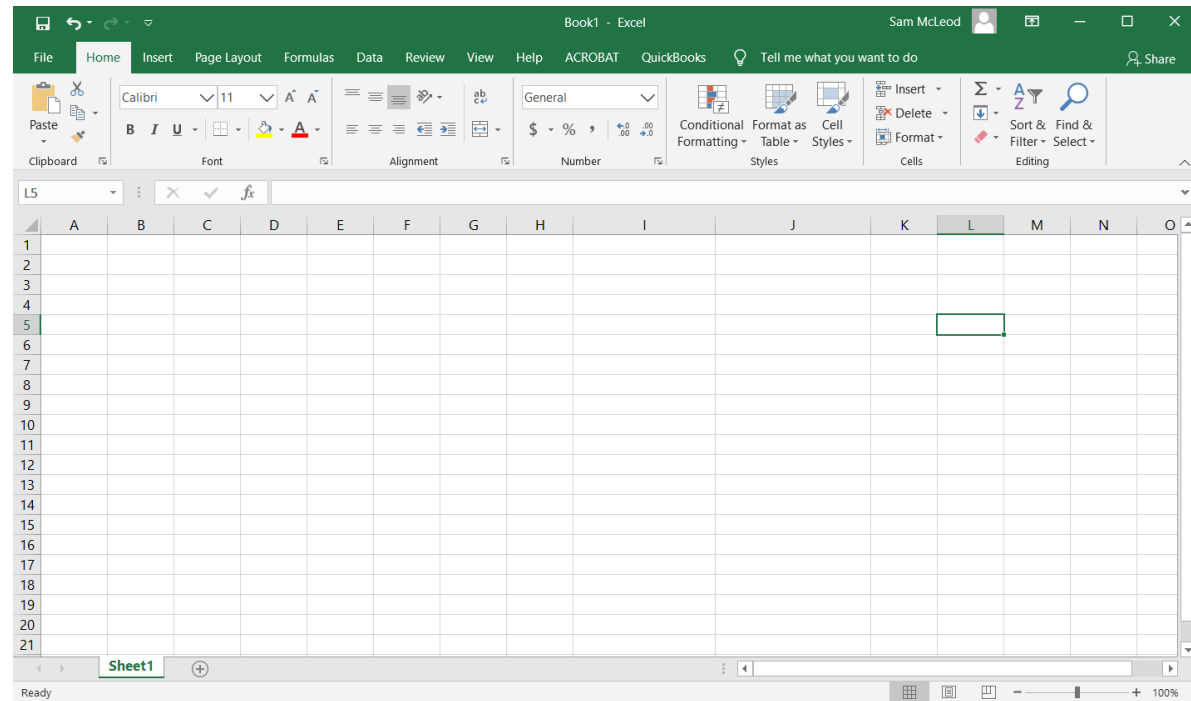
Outdated FOG Program Methods

- Spreadsheet of Users
- Pen & Paper Inspections
- Emailed/Scanned Cleaning Records
- Lack of Education and Training Resources
- Lack of Sewer Overflow Documentation

Spreadsheet of Users

The Classic Spreadsheet

- Not Integrated With Other FOG Data
- Totally User Dependent
- Consumes Significant Time
- Inconsistent Data Entry
- Limited Data



Pen & Paper Inspections

- Difficult to track and follow up with facility
- The paper copy can be discarded easily
- Requires physical storage and or scanning
- No notification feature for due dates
- Lack of documentation and evidence



Emailed/Scanned Cleaning Records

- Time consuming for municipalities and waste haulers
- Inconsistent cleaning record formats
- Handwriting issues
- Disorganized
- Lack of cleaning logs

Lack of Education and Training Resources

- Education and training is mostly ignored
- Education campaigns can be costly
- Lack of certification for completion
- Biggest issue is time and money



Lack of Sewer Overflow Documentation

- Reports are generally written with pen & paper
- Stored in file cabinets
- No photographic evidence
- No ability to map hot spots
- Hard to spot patterns

New Advancements in FOG Technology

- Electronic Cleaning Record Submission
- Detailed FOG Generator Profiles
- Mobile Inspection Capabilities
- Automatic Alerts
- Electronic Sewer Overflow Documentation

Electronic Cleaning Record Submission


- Cleaning records can be completed in the field or at the office
- All records are instantly available for all stakeholders online
- Consistent format
- No missing data inputs
- Photograph attachments if needed
- Easily searched along with cleaning logs

Detailed FOG Generator Profiles

- Allows the municipality to ensure the correct device is input
- Device type, size, location, cleaning frequency, and due date
- Specific notes (special key needed, extra hose needed, etc...)
- Photograph of device

View/Edit Grease Separation Device

Device Type



Interior Trap

Frequency of Professional Pumping/Cleaning Service
Monthly

Device Make, if known
Zurn

Start/Next Date of Service
10/28/2019

Device Model, if known
Z-25

Device Location
In main kitchen under 3 bowl sink


Device Flow Rate (in GPM/lbs), if known
25 GPM / 50 lb

Cleaning Instructions
Cleaning shall include the complete removal of the full contents of the FOG control device, including settled solids, wastewater and floating materials. Side walls, baffle walls, cross pipes and inlet and outlet pipes shall be pressure washed or scraped to remove all attached materials. Decanting, skimming or back flushing is prohibited.

Mobile Inspection Capabilities

- Conduct inspections from any smart device
- Take photographs and have them saved within the inspection
- Issue Notice of Violations
- Track Notice of Violations
- Fully customized inspection forms
- Receive resolutions through app

Old Castle (External) - 958 gallons



Interceptor Inspection Items:

- Unsecure lid(s)
- Seepage is visibly flowing from device
- Device is in need of repair

Corrective Action

The device must be repaired and brought into working condition. A photograph of the repair must be submitted to the inspector prior to approval.

Fine Amount for this inspection, if any

Date Due

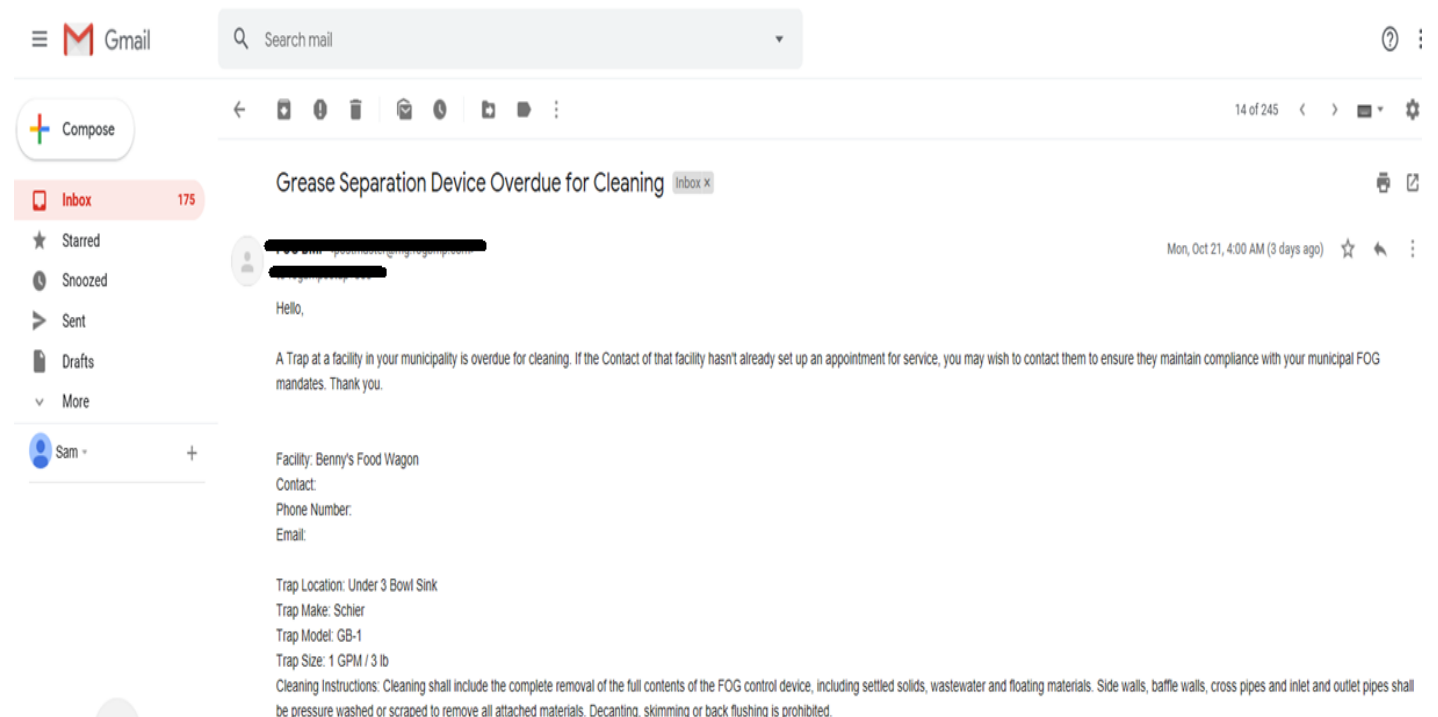
Evidence of Violation

- Device needs to be replaced
- Facility does not have a grease separation device
- Unapproved grease separation device installed

Automatic Alerts

Customized alerts are available for the following functions

- Past Due Cleanings
- Violation Resolutions
- Training Completion
- User Registration
- Message Blasts



Electronic Sewer Overflow Documentation

Customized alerts are available for the following functions

- Utilize mobile response capabilities for infield use
- Get accurate GIS positioning data
- Attach photos of the overflow event
- Attach required submittal documents
- Database automatically displays hot spots

The screenshot displays a mobile application interface for recording a sewer overflow. The form is titled "Sewer Overflow Record" and includes the following fields and sections:

- Date:** 04/03/2020
- Overflow Type:** SSO (selected from a dropdown)
- Location:** Intersection of 12th Street & Main Street
- Created By:** John Doe
- Sewer Lid ID #:** GCM - 46
- Latitude:** 39.872102
- Longitude:** -82.778521
- Get Location:** A green button to refresh location data.
- Attached Files and Photos:** A section with a "+ Add Files and Photos" button. Two files are listed: "overflow.jpg" and "EPA_SSO_Report.docx", both with a red "x" icon and the note "(Will be uploaded on save)".
- Actions taken:** A text area containing "Spill has been contained and blockage has been removed. In the process of calculating estimated gallons spilled."
- Notes:** A text area containing "Following up with DEP. Sending inspectors to upstream FOG generating facilities to determine contributors to blockage."
- Buttons:** "Cancel" (red) and "Save" (green) buttons at the bottom right.

FOG Software Management Programs

10 QUESTIONS MUNICIPALITIES NEED TO ASK BEFORE USING FOG SOFTWARE

1. Is there an annual cost per user? How much additional cost per user?
2. Is this fully functional from mobile devices? If so, do you charge extra for this?
3. Is there an annual flat fee for full access or do you break it down by Levels/tiers?
4. Do you charge for set up/implementation/data integration? How much?
5. Do you charge for program training? How much?
6. Is there ever any potential charge for customer support? How much?
7. Do you charge additional fees for program updates? How much?
8. Are software downloads required to our internal computers?
9. Can FSE users access the portal? If so, is this an extra cost? How much?
10. Can waste haulers access the program? If so, is this an extra cost? How much?

THANK YOU

Sam Mcleod

Email: sam@fogbmp.com

Phone: 614-519-1769

