FOG Data Management

POLLUTION PREVENTION
resource center

pprc

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

USDA Rural Development
U.S. DEPARTMENT OF AGRICULTURE

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TECHNICAL RESOURCES TAB

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National Resource Reference Guide

FOG discharged to the sewer can accumulate along sewer pipe walls coating pipes until wastewater flow through the line is restricted, causing SSOs and blockages. These occurrences may result in property damage, environmental problems in nearby surface waters, and public health hazards. There has been an increased emphasis on preventing SSOs recently, in part because of the pending United States Environmental Protection Agency (U.S.EPA) regulations for sanitary sewers, but also because new collection system requirements are being issued by state and local regulatory authorities. As a result, source control and pretreatment programs have had to reevaluate or establish FOG Control Programs, which may include a food service establishment (FSE) program component.

The six steps necessary to implement a FOG Abatement program are outlined below. This website contains references and documents created by Western States Alliance, the Pacific Northwest Pollution Prevention Resource Center (PPRC), and IW consulting Service, LLC. The USDA Rural Utilities Service provided funding for this resource.

Implementing a FOG Abatement Program

Follow the six steps below to create and implement a FOG Abatement Program. Two excellent places to start are the WSA FOG Primer and the WSA FOG Source Control Guide.

1. Characterizing FOG Sources. Determine the cause of FOG blockages and the upstream sources of the FOG. Identify major sources of FOG to result in a more effective utilization of municipal resources when developing a FOG Abatement Program.

The worksheet, Characterizing FOG Sources Worksheet, will help systematically identify and characterize the amount of FOG produced by FSEs.

WSA's FOG Source Control Guide contains the information to provide a thorough understanding of how FOG is discharged from commercial Food Service Establishments (FSEs), how kitchen fixtures are impacted by FOG and the most effective means of capturing FOG. It also contains kitchen best management practices (BMPs) to help reduce food waste and prevent FOG from entering the conveyance system. See this video, a how-to guide to executing a FOG Triage Program.

WSA's Grease Interceptor Product Standards (2019 Editions) is a thorough review that explains product standards which ensure that approved devices operate in accordance with minimum performance or design requirements. It includes information on the standards that govern grease interceptors (plumbing standards and sizing methods) and testing and rating of grease interceptors.

2. Understanding Regulatory Requirements. Researching and understanding regulatory requirements and legal framework are necessary for successful and enforceable FOG Abatement Program.

The fact sheet, FOG Program Enforcement Options, also available in Spanish, provides examples of enforcement that can be accomplished within existing municipal code or as part of a newly created FOG Abatement Program. EPA's enforcement response guidance, written in 1989, Guidance

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TECHNICAL RESOURCES

DATA COLLECTION & STORAGE

What data do you need?

How do you collect the data?

How is the data stored?

Can the data be easily analyzed?

Poll Question

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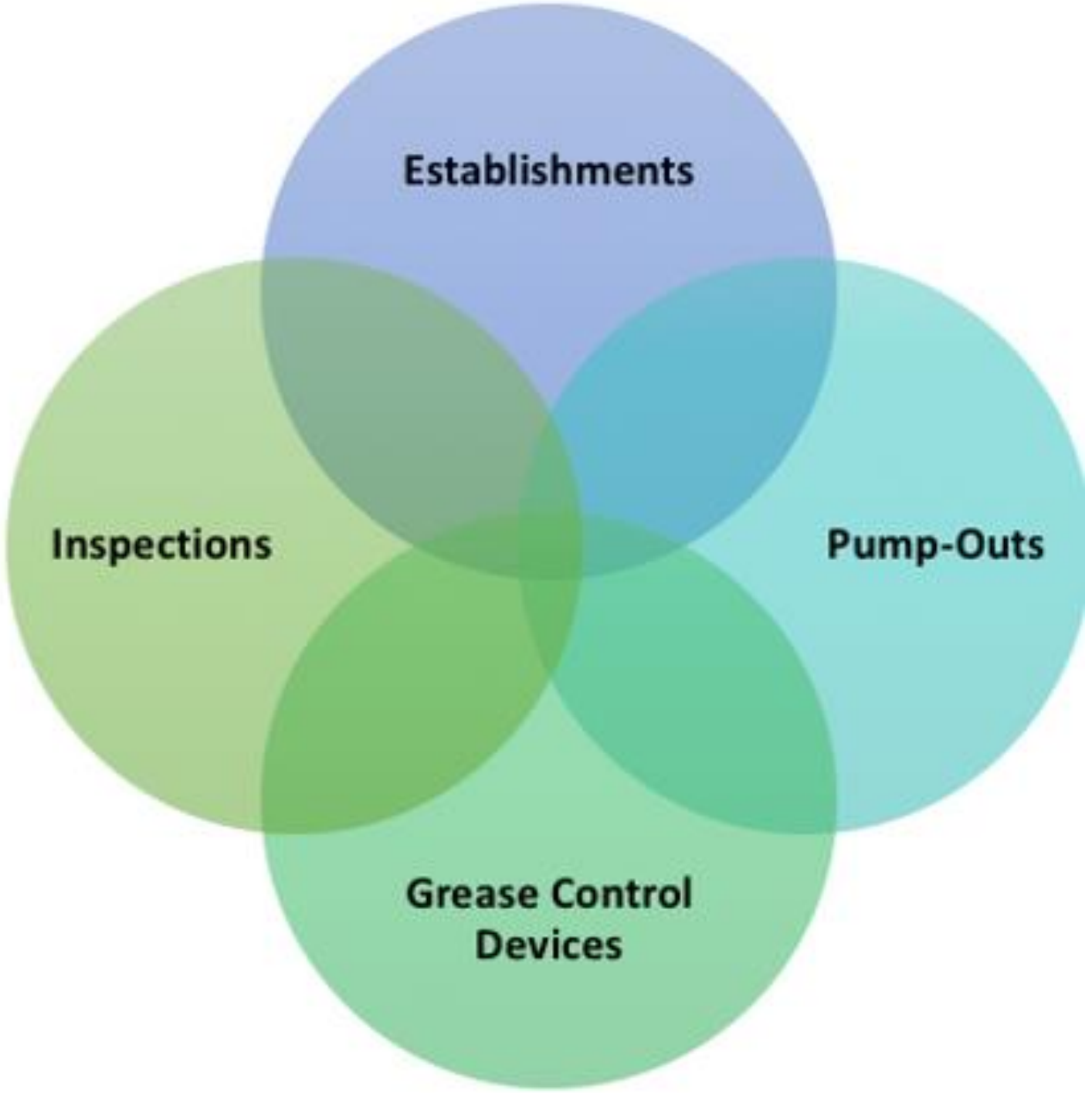
FOG Program Tracking

Track FOG program elements as separate entities

Add more as your program matures.



FSE DATA NEEDED

FSE Tracking (partial list)

- FSE Name
- Physical address (and GIS data or latitude/longitude)
- Potential FOG loading of FSE (very high, high, medium, low)
- Proximity of FSE to a FOG-impacted sanitary sewer line (FOG line)
- Type(s) of FOG pretreatment
- Grease interceptor maintenance history
- Fixtures and drains connected to interceptor
- Contact information for FSE
- Landlord or property manager contact information

Poll Question

PUMPER INFORMATION MANAGEMENT

Pumper Name

CONTACT INFORMATION

Registration #

AUTHORIZED DISPOSAL SITE

PUMPING MANIFEST

PUMP-OUT VOLUME

FOR EACH PUMPOUT EVENT

COLLECTION SYSTEM DATA NEEDED

Partial list

- Which collection system line segments are impacted by FOG?
- What is the cleaning frequency for these FOG lines?
- Does the frequency exceed the established line cleaning frequency for the normal collection system?
- What is the cost per line segment to keep these FOG lines cleared?

COLLECTION SYSTEM DATA NEEDED

Partial list - continued

- Are there manholes impacted by FOG?
- What is the cleaning frequency for these manholes?
- Are there pump stations impacted by FOG?
- How often are these stations cleaned?
- What is the cost per cleaning?
- Are additives used in these stations to “control” FOG?
- What is the cost of using these additives?

EXCEL SPREADSHEET EXAMPLE

RESTAURANTS WITH TRAPS	HAULER	CLEANING SCHEDULE	LAST CLEANED	DUE FOR CLEANING
Abella Italian Kitchen	Baker	monthly	23-Oct-19	19-Nov
Bellagios	River City	2 months	11-Sep-19	19-Nov
Boeckman Creek School	River City	Annually	9-Jul-19	20-Jul
Boones Junction Pizza	River City	2 months	8-Oct-19	19-Dec
Boston's	Encore	monthly	19-Nov	19-Dec
Beer Station CLOSED 2018	NW Bio-fuel	3 months	18-Jul	18-Oct
Better Bean Company	Baker	6 month	18-Mar	18-Sep
Canton Phoenix	Oregon Oils	monthly	1-Jul-19	19-Aug
Charbonneau Country Club	River City	6 months	9-Jul-19	19-Dec
Corner Coffee Shop	River CIty	3 months	12-Mar-19	19-Apr

Features of Data Management Systems

Cloud based	Mobile friendly	Easy to use	Pumpers can enter data
You can track and manage pump out reports	You can auto-schedule inspections & submit reports from the field	FSEs receive reports	Easy for FSEs to maintain compliance

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Poll Question

FOG INFORMATION MANAGEMENT SOFTWARE QUESTIONS

1. What is the ANNUAL cost per user license?
2. Fully functional from desktop, tablets, and smartphones? If so, do you charge extra for mobile capability?
3. Is there an annual flat fee that grants full access to the complete program and all available features? Are there levels/tiers? If so, what are they and what are the annual costs?
4. Is there a charge for set up, data integration, and implementation/? if so, how much?
5. Is there a charge for multiple municipal users? If so, how much per user?

Adapted from “Choosing the right software to manage your FOG Control Program”, FOG in the News, US FOG ALLIANCE, June 2022

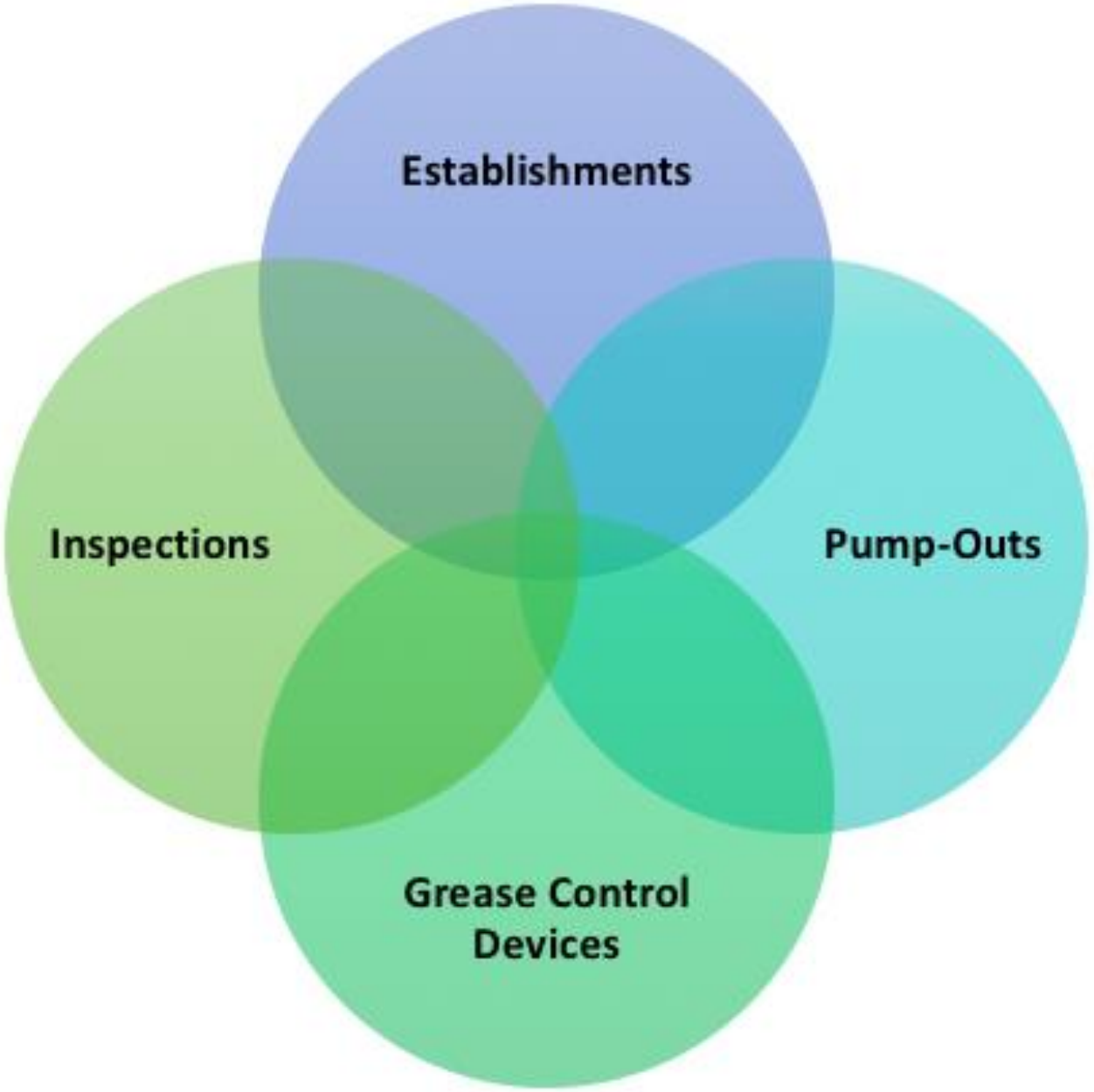
FOG INFORMATION MANAGEMENT SOFTWARE QUESTIONS

6. Is there a charge for program training? If so, how much?
7. Is there ever any potential charge for customer/technical support? If so, how much?
8. Are there additional charges for program updates? If so, how much?
9. Are software downloads required? If so, how much extra cost?
10. Can FSE users access the portal with their own passwords? If so, is this an extra cost? How much?
11. Can transporters access the portal with their own passwords? If so, is this an extra cost? How much?

Adapted from “Choosing the right software to manage your FOG Control Program”, FOG in the News, US FOG ALLIANCE, June 2022

WHATEVER YOU DECIDE TO USE

You'll want to include these four elements



Poll Question

Free FOG Data Management Software

Grant funded by USDA and EPA

WSA/PPRC provides first year fee to you for free

Priority to programs that meet one or more of our demographic criteria. Serve a community with less than

80% of the state's non-metropolitan median household income

10,000 or fewer in population

85% or less "white only" population

Find your data

State **non-metropolitan median household income** at https://www.ruralhealthinfo.org/charts/59

City **population, Median household income,** and **"white only" population** percentage at https://www.census.gov/quickfacts/

Goals of providing FOG software

Help show cost savings through automation.

Inspections are prioritized to FSEs that exceed pump-out targets.

Reductions in FOG line clean-outs due to more frequent pump-outs

Reductions in cost of FOG treatment at the WWTP

Help show the environmental impact of a well-managed program.

Regular pump-outs to avoid by-passing.

Correlation of FSEs and FOG lines

Correlation of FSEs/FOG lines/SSOs

Provide benchmarking data.

Benchmarking

Sanitary Sewer Overflows associated with FOG blockage

FSE Oversite costs

- Inspections
- Data entry
- Corrective action

Hot Spot Area Costs

- Line cleaning cost
- Line inspection costs
- Lift station cleaning/inspections

WWTP FOG treatment costs based on reduced FOG concentration

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Contact us

Justin Meyer

jmeyer@pprc.org

206-399-1066

Jean Waters

jwaters@pprc.org

402-250-0999