

Who's Your Data?

Developing a Data Driven FOG Management Program

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Who's Your Data? Overview

Build an effective FOG program with minimal staff by

- ❖ Identifying the Critical Factor
- ❖ Getting Someone Else to Collect Data
- ❖ Get a Data Management System
- ❖ Using Data to Manage Compliance
- ❖ One Program's Results

Identifying the Critical Factor

Which variable is most critical to controlling the discharge of FOG?

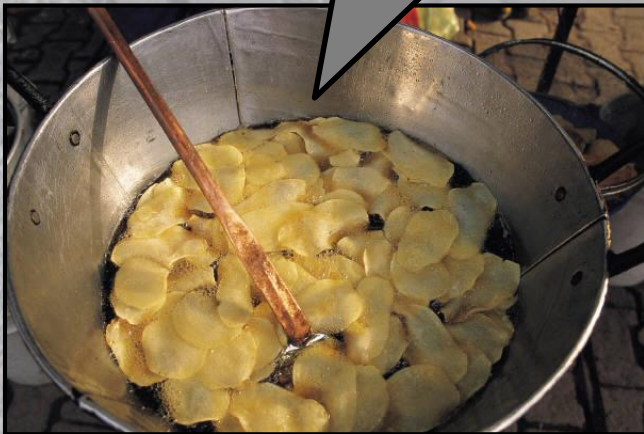
Hint: Follow the ~~money~~ grease...



FSE
Management?

Culinary profiling?

Food
Type?



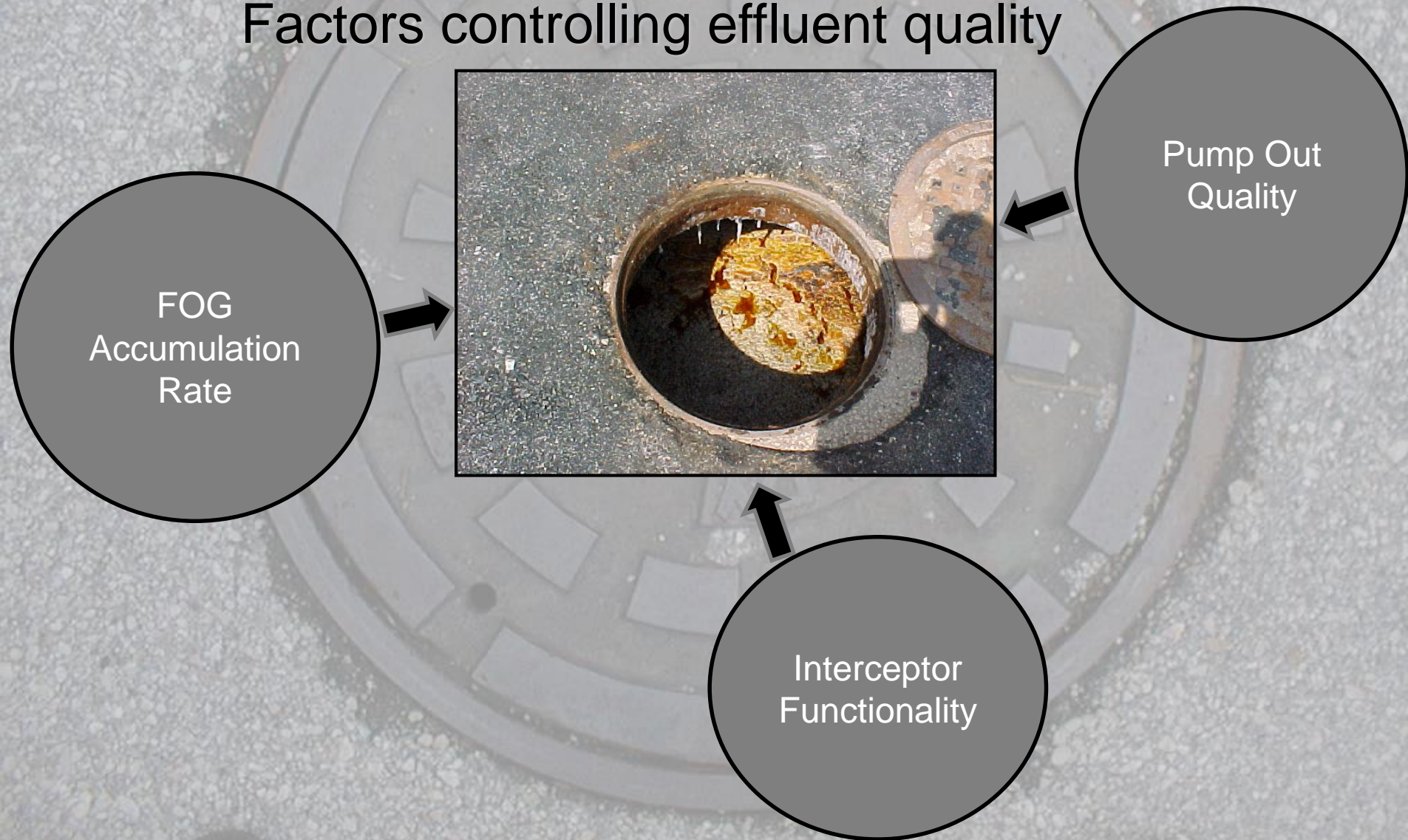
Kitchen
BMPs?



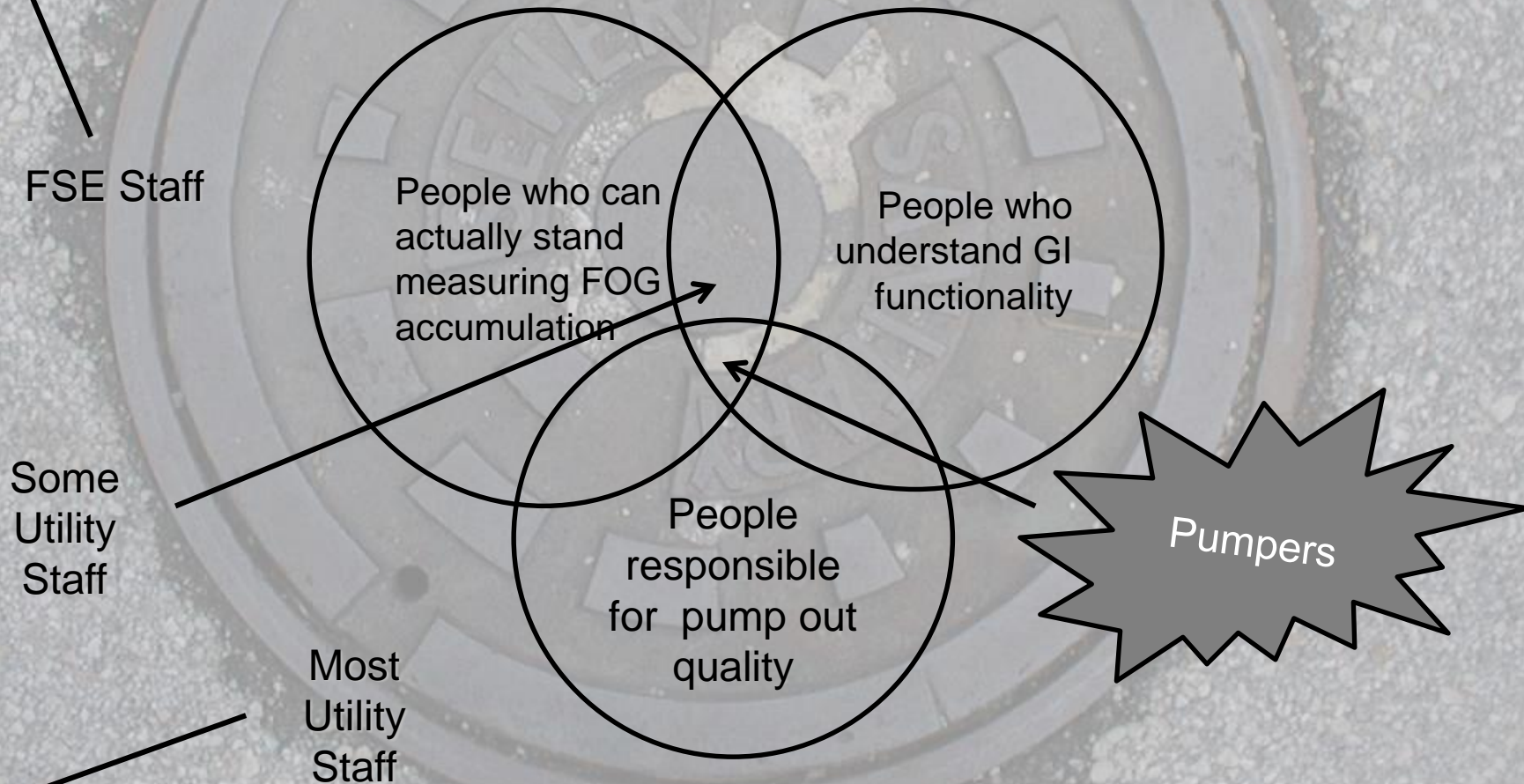
**GREASE
INTERCEPTOR (GI) !!**

Identifying the Critical Factor

Factors controlling effluent quality



Identifying the Critical Factor



Getting Someone Else to Collect Data

Preferred Pumper (PP) Program - Voluntary

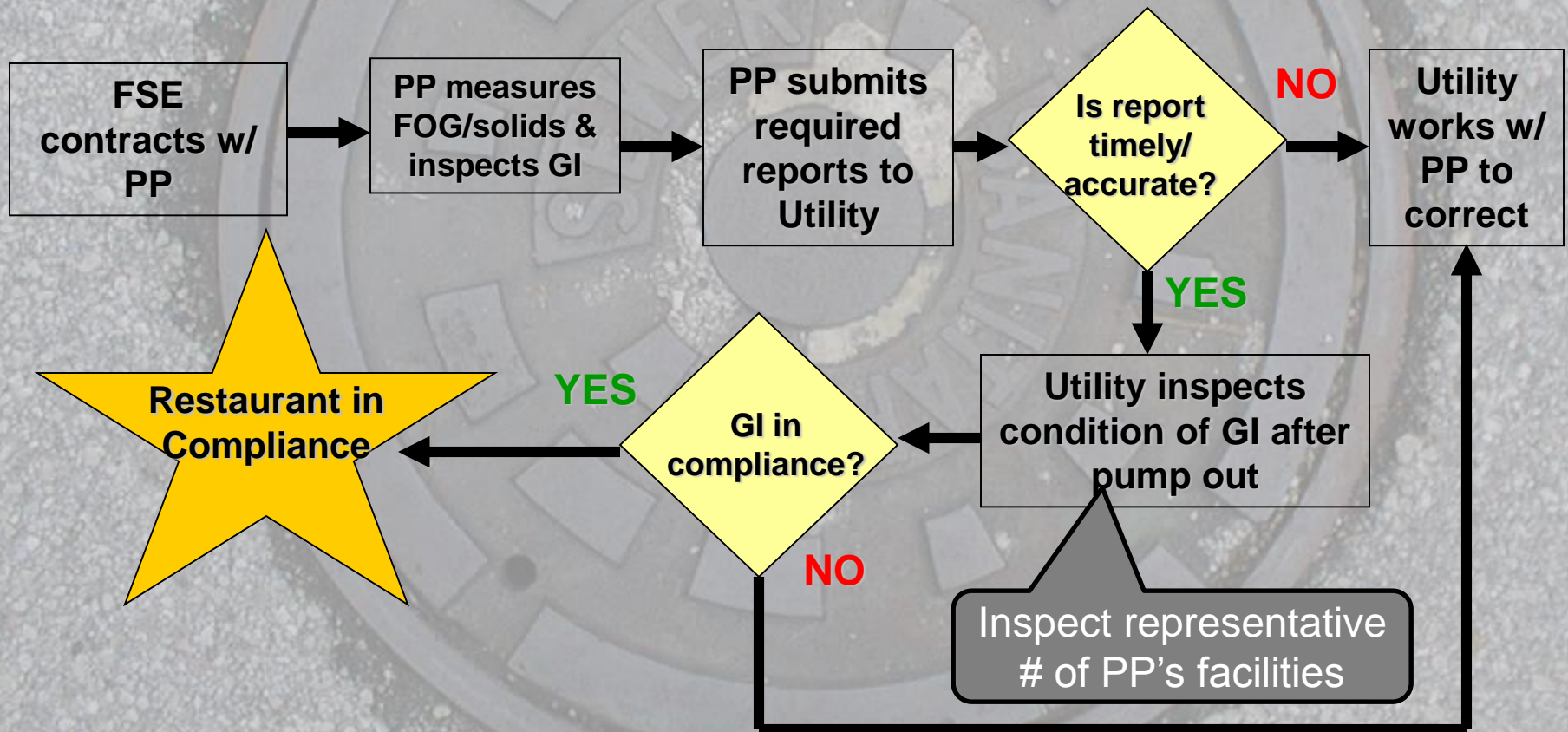
PP Responsibilities:

- ❖ Quarterly service
- ❖ Measure FOG accumulations
- ❖ Complete & submit reports for FSE
- ❖ Properly pump out GI



Getting Someone Else to Collect Data

How the Preferred Pumper program works:



Getting Someone Else to Collect Data

PP Benefits

- ❖ Levels playing field for all pumpers
- ❖ Endorsement from utility
- ❖ Assured of plenty of business

FSE Benefits

- ❖ Shifts much regulatory burden to pumpers
- ❖ FSE assured of quality service

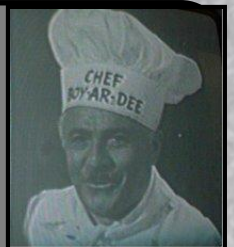


Getting Someone Else to Collect Data

Utility Benefits:

- ❖ Creates a uniform set of rules to measure pumpers
- ❖ PP provide plethora of performance measurements
- ❖ Staffing requirements geared to overseeing performance of few (PP) not the many (FSE)

Minimize the weak link.....



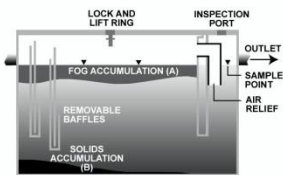
Get a Data Management System

Data via pump out report – needs to go somewhere

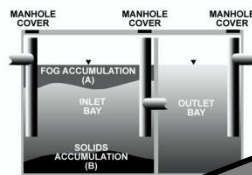
Preferred Pumper Program FOG Pump Out Report

Business: _____ Store # _____ Phone: _____

Address: _____
Street City Zip



Hydromechanical



Gravity

REMINDER: FOG Layer **DOES** include oil. Only (2) _____ Sheet.

	GRD #1 <input type="checkbox"/> Hydro <input type="checkbox"/> Gravity	GRD #2 <input type="checkbox"/> Hydro <input type="checkbox"/> Gravity	GRD #3 <input type="checkbox"/> Hydro <input type="checkbox"/> Gravity
Location			
FOG	Inches	Inches	Inches
Solids	Inches	Inches	Inches
Total Gallons			
Condition (check only those that apply)	<input type="checkbox"/> Fully Functional <input type="checkbox"/> Needs Repair <input type="checkbox"/> Needs Inspection	<input type="checkbox"/> Fully Functional <input type="checkbox"/> Needs Repair <input type="checkbox"/> Needs Inspection	<input type="checkbox"/> Fully Functional <input type="checkbox"/> Needs Repair <input type="checkbox"/> Needs Inspection
Explanation			
Notified Manager of GRD Condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Certification: I hereby certify that all information provided herein is true and correct to the best of my knowledge. The Grease Removal Device serving this establishment was cleaned completely of residual fats, oils, grease and other solid materials.

Print name of waste hauling company

Print name of person who performed service

Date

Send completed form within 10 days to:

Name of municipality: (check one or write in): _____

- ☐ Portland ☐ Gresham ☐ Wilsonville ☐ Troutdale ☐ Water Environment Services
☐ Clean Water Services ☐ Newberg ☐ Canby ☐ Oak Lodge Sanitary District

Modified 1/2011

Accumulation

PP measures & records layer depths

Functionality

PP inspects GI condition at each PO

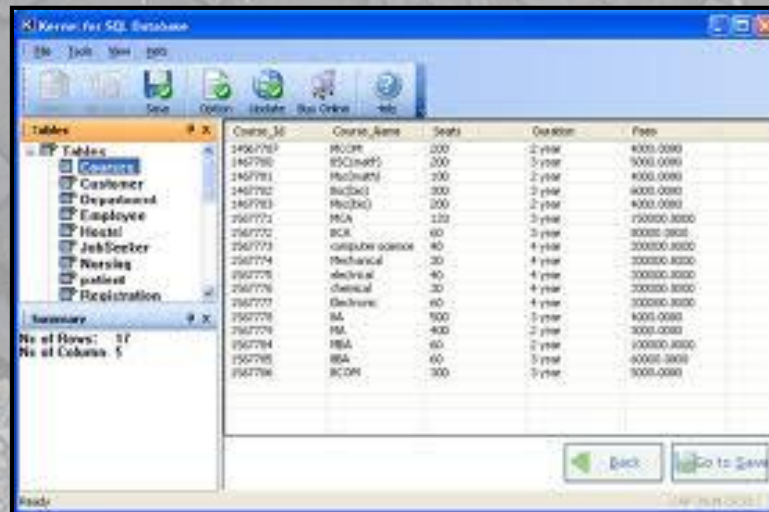
Frequency/Timeliness

Used to schedule next PO date

Get a Data Management System

System Should:

- ❖ Track PO due dates
- ❖ Calculate solids & FOG accumulation percentages
- ❖ Track GI functionality



Course_Id	Course_Name	Seats	Duration	Fees
1467767	MCQ	200	2 year	4000.0000
1467768	MCQmath	200	3 year	5000.0000
1467769	MCQmath2	200	2 year	4000.0000
1467770	MCQmath3	200	3 year	4000.0000
1467771	MCQ	200	2 year	4000.0000
1467772	MCA	120	3 year	150000.0000
1467773	BCR	60	3 year	30000.0000
1467774	computer science	40	4 year	300000.0000
1467775	Mechanical	30	4 year	300000.0000
1467776	electrical	40	4 year	300000.0000
1467777	chemical	30	4 year	300000.0000
1467778	Decisions	60	4 year	300000.0000
1467779	BA	100	3 year	4000.0000
1467780	MA	400	2 year	3000.0000
1467781	BSA	60	2 year	100000.0000
1467782	BSA	60	3 year	40000.0000
1467783	BCOM	300	3 year	3000.0000

Get a Data Management System

Establish FOG Program Metrics:

Reduce Commercial FOG Related Sanitary Sewer Overflows (SSO)

- ❖ Timely Pump Outs
- ❖ Interceptor Accumulation of FOG & Solids
- ❖ GI Functionality
- ❖ PP Performance

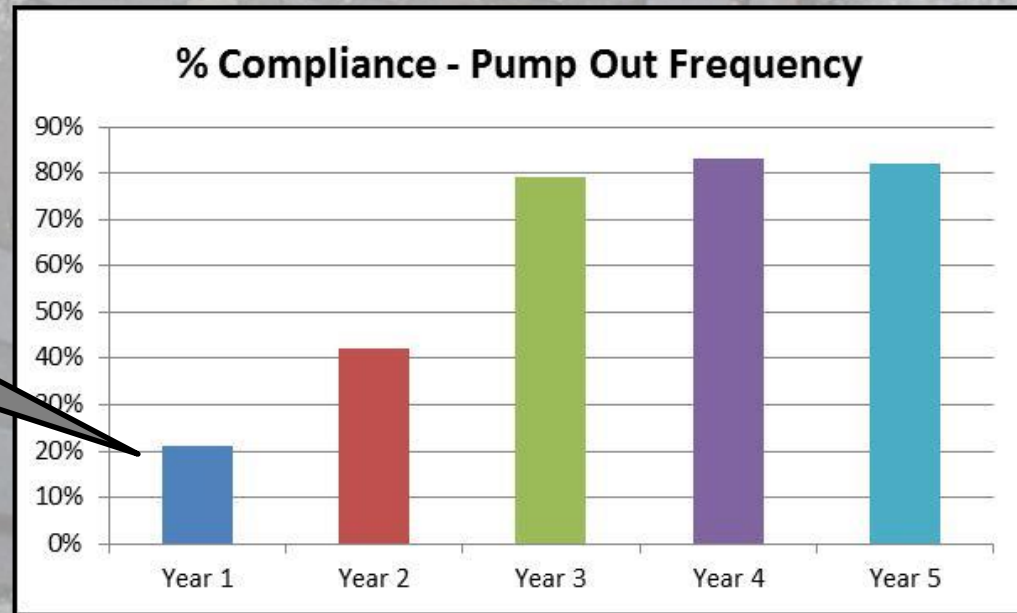


Using Data to Manage Compliance

Step 1: Pump out Frequency/Timeliness

- ❖ Software schedules next pump out due date
- ❖ Monthly query of late reports
- ❖ Notify PP of late reports

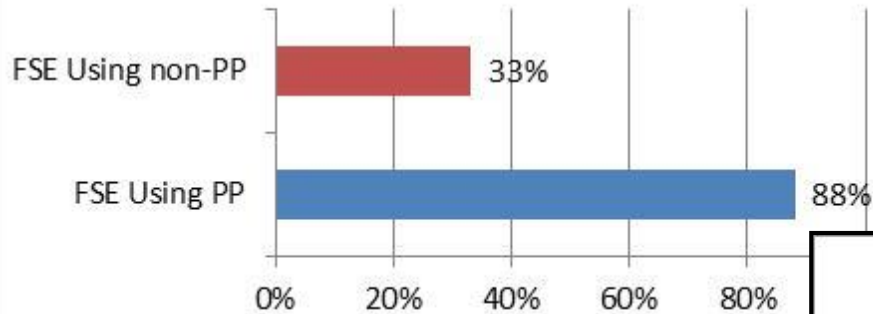
Also known as “Meeting People and Making New Friends Step”



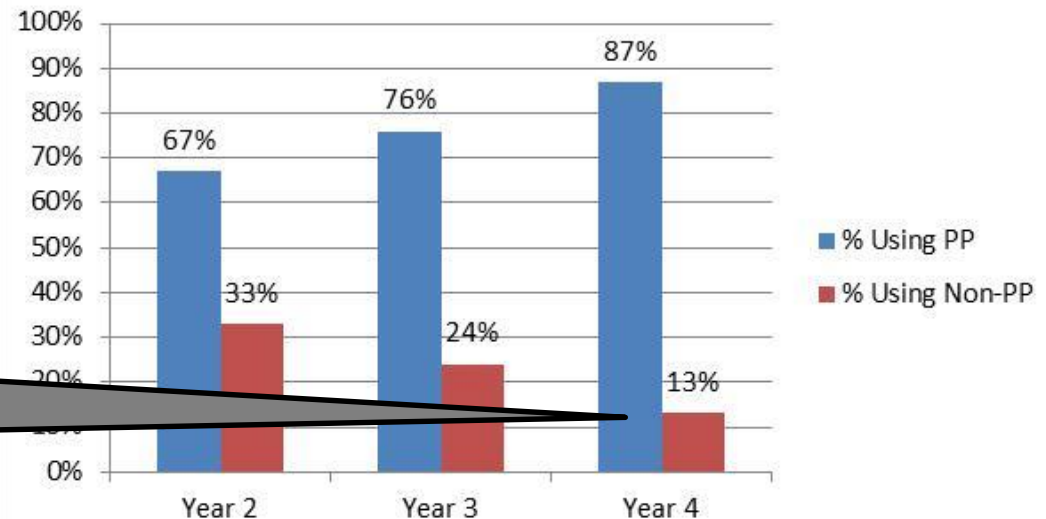
Using Data to Manage Compliance

Step 1: Pump out Frequency/Timeliness

FSE Compliance Rate: Preferred Pumper vs. Non-PP



FSE Using PP vs. Non-PP

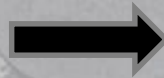
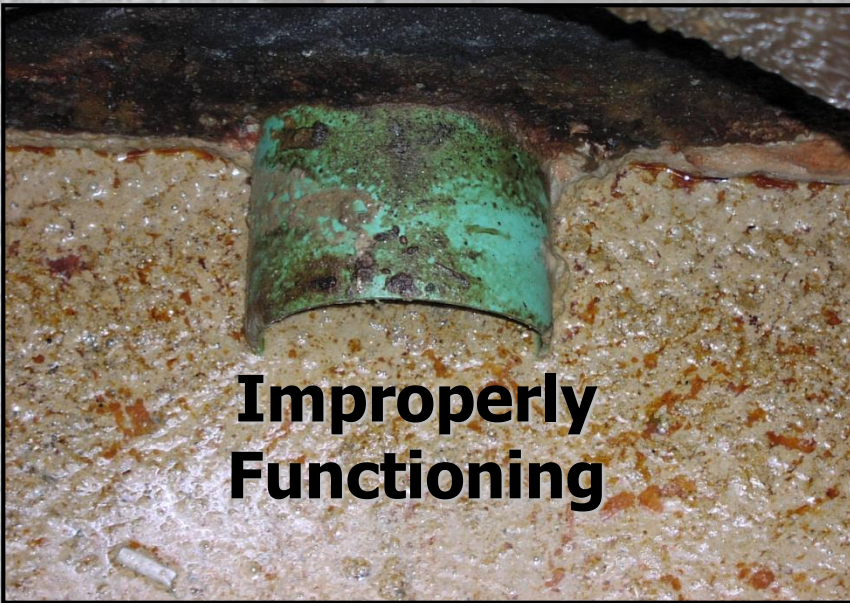


Steady enforcement
drove more FSE to
contract w/ PP

Using Data to Manage Compliance

Step 2: GI Functionality

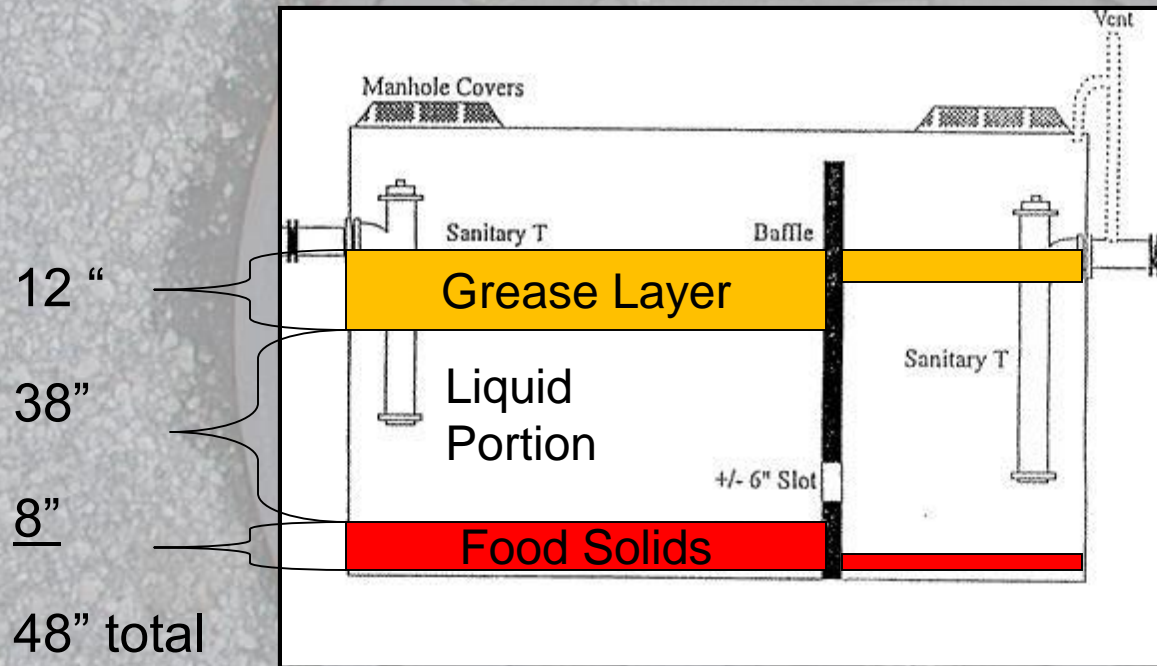
Flag malfunctioning GI from PO reports



Now that's a pretty grease interceptor!

Using Data to Manage Compliance

Step 3: Accumulation Rates



12"

38"

8"

48" total
functional
depth

Software calculates %
and establishes pump
out frequency

20" of 48" occupied by grease & solids = 42%

Using Data to Manage Compliance

Step 3: Accumulation Rates

Enforcement encourages BMP adherence

- ❖ >25% for 3 pump out cycles
- ❖ Increase PO frequency
- ❖ Incentivizes BMPs

48" FOG + 8" Solids = BMP, What?

**Preferred Pumper Program
FOG Pump Out Report**

Business: La Carretta Store # _____ Phone: 503-661-7647
Address: 660NE Burnside Rd City: Gresham Zip: 97030

Street _____ City _____ Zip _____

Hydromechanical **Gravity**

REMINDER: FOG Layer **DOES** include oil. Only (3) GRD's Per Sheet.

	GRD #1 (<input type="checkbox"/> Hydro <input checked="" type="checkbox"/> Gravity)	GRD #2 (<input type="checkbox"/> Hydro <input type="checkbox"/> Gravity)	GRD #3 (<input type="checkbox"/> Hydro <input type="checkbox"/> Gravity)
Location	<u>Behind 810g</u>		
FOG	<u>48</u> Inches		
Solids	<u>8</u> Inches		
Total Gallons			
	<input checked="" type="checkbox"/> Fully Functional	<input type="checkbox"/> Fully Functional	<input type="checkbox"/> Fully Functional
	<input type="checkbox"/> Needs Repair	<input type="checkbox"/> Needs Repair	<input type="checkbox"/> Needs Repair
	<input type="checkbox"/> Needs Inspection	<input type="checkbox"/> Needs Inspection	<input type="checkbox"/> Needs Inspection
Explanation	<u>Very Deep Ridges 48-60" C 8" Solids</u>	<u>Lids were covered with asphalt Very Thick</u>	<u>Leak between chambers</u>
Notified Manager of GRD Condition?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

Certification: I hereby certify that all information provided herein is true and correct to the best of my knowledge. The Grease Removal Device serving this establishment was cleaned completely of residual fats, oils, grease and other solid materials.
Oregon Oils

Print name of waste hauling company _____ Print name of person who performed service Eric J. Simonson Date 07-11-12

Send completed form within 10 days to: _____

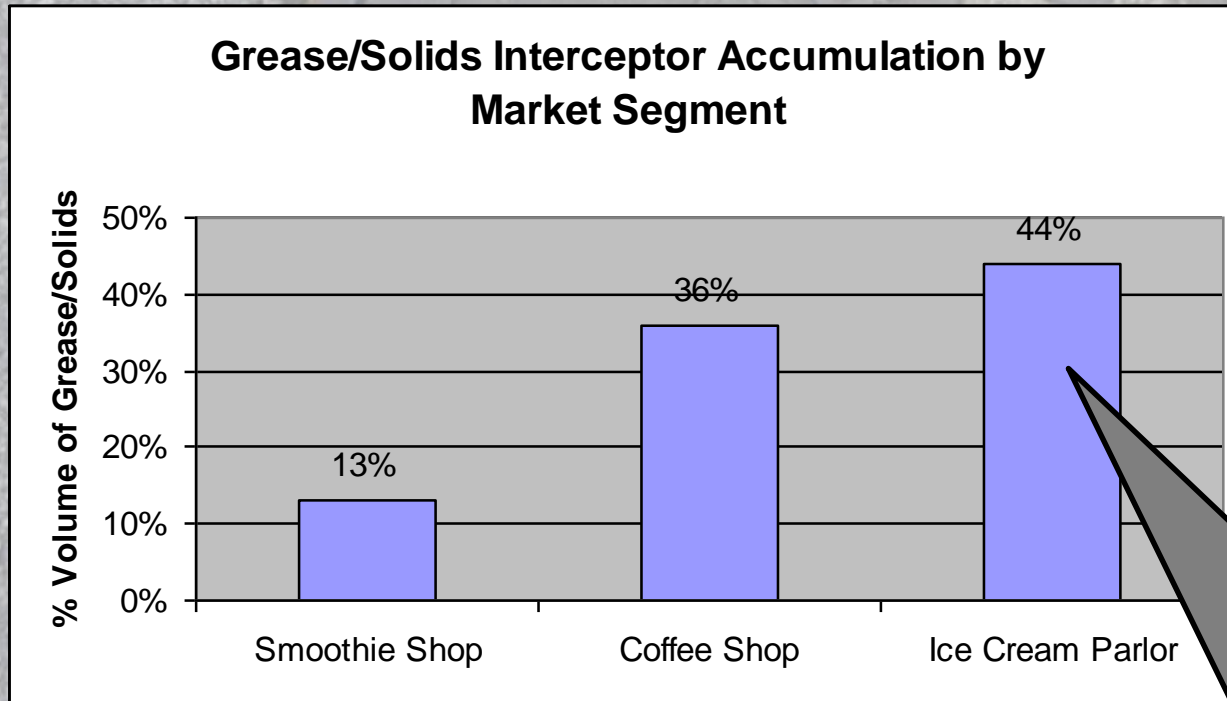
Name of municipality: (check one or write in): Gresham

☐ Portland ☒ Gresham ☐ Wilsonville ☐ Troutdale ☐ Water Environment Services
☐ Clean Water Services ☐ Newberg ☐ Canby ☐ Oak Lodge Sanitary District

Using Data to Manage Compliance

Step 3: Accumulation Rates

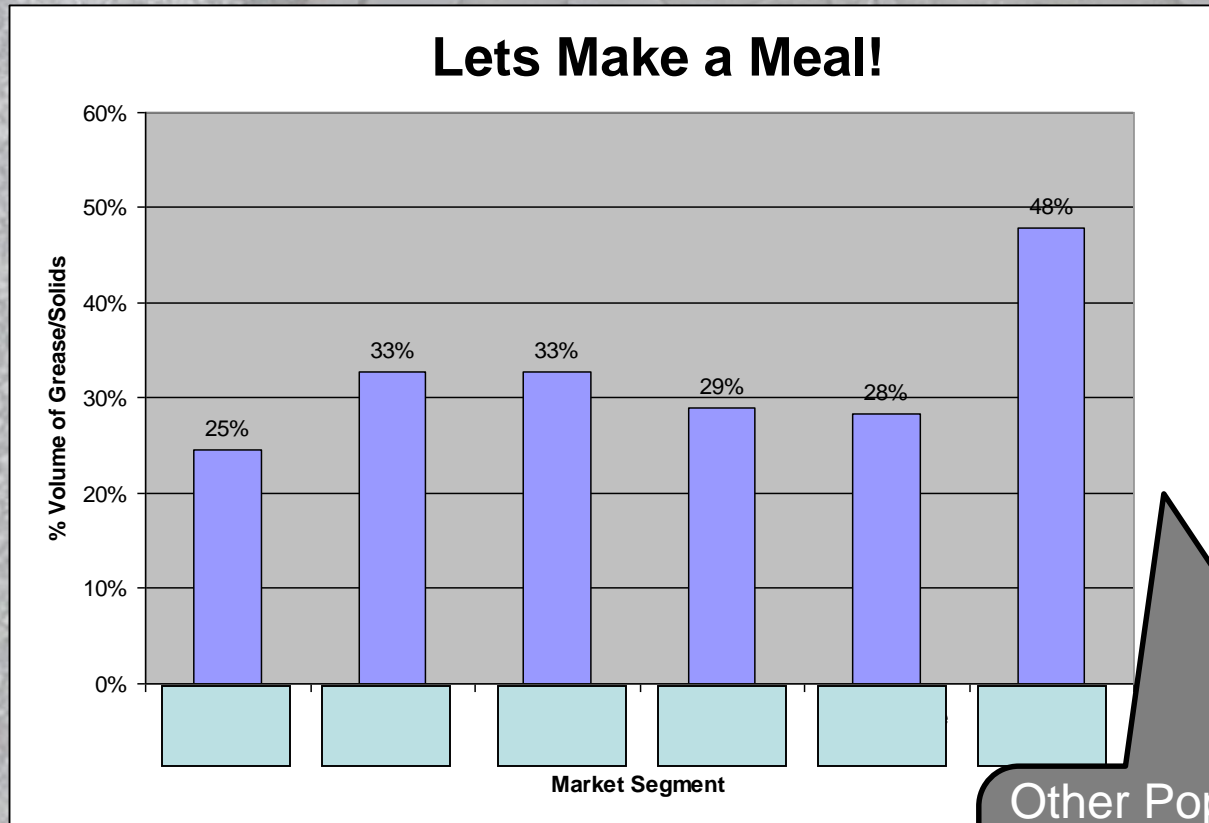
Use data to determine loadings by market segments



You scream, I scream,
We all scream: CLEAN OUT
YOUR *#%@ INTERCEPTOR!!!

Using Data to Manage Compliance

Step 3: Accumulation Rates – Party Games!



FF Chicken

Make n Take

FF Burgers

Asian

Full Service

Buffet

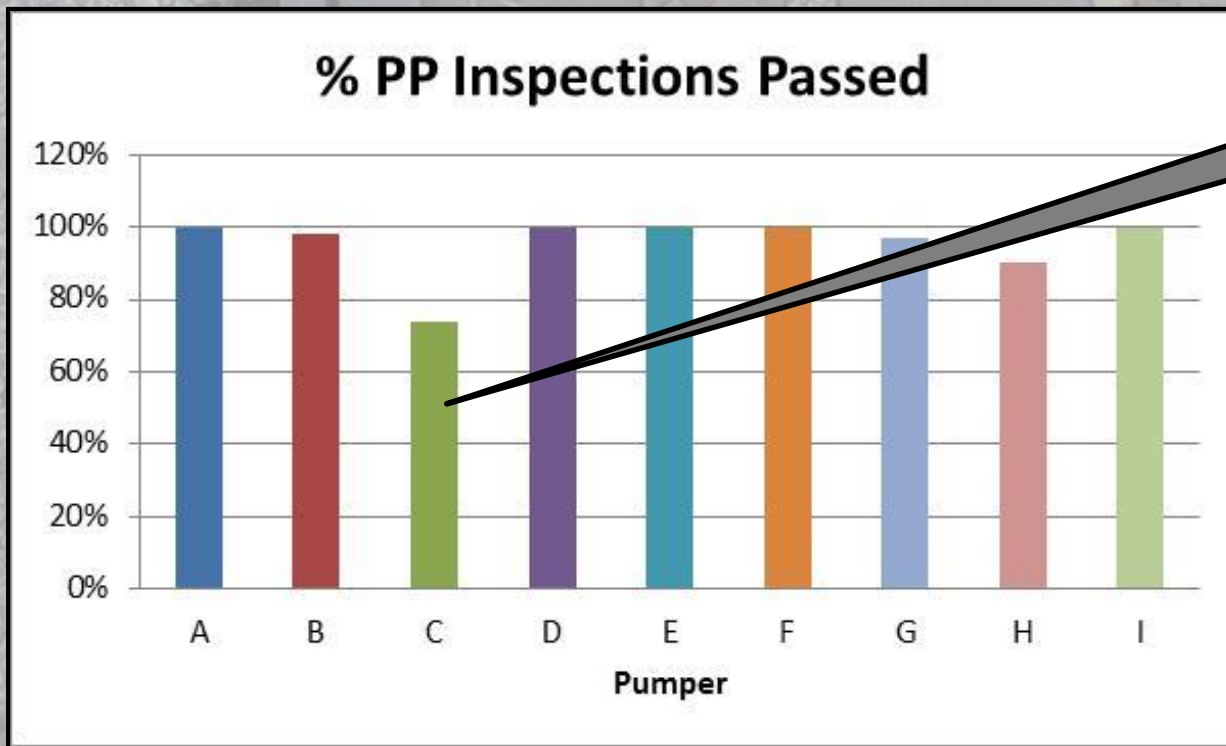
Other Popular Interceptor Games:

- Family FOG
- Wheel of Fortune Cookie
- The Fries is Right

Using Data to Manage Compliance

Step: Somewhere Near the Beginning: Pumper Performance

Focusing on Pumpers leads to dramatic improvement in pump out performance



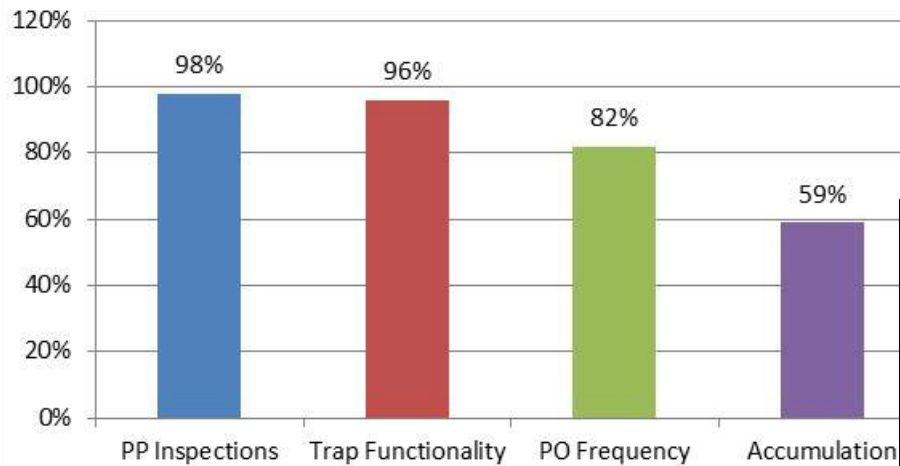
Pumper "C" gets special attention

Using Data to Manage Compliance

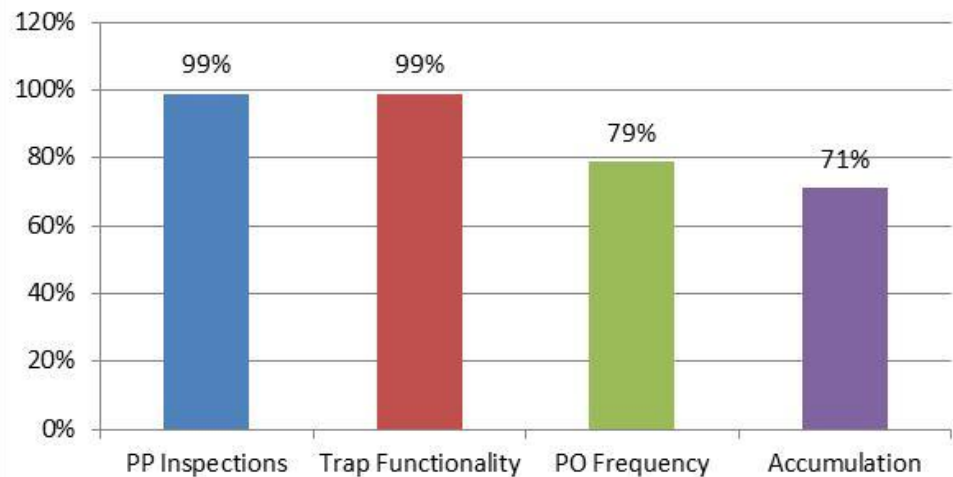
Step 4: Use metrics to focus enforcement efforts

Quarterly review of program metrics

FOG Compliance Rate by Type - Jan.

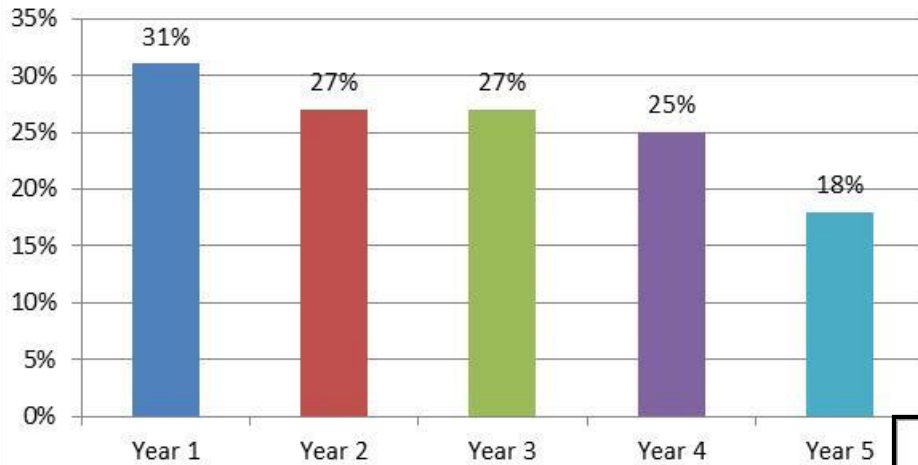


FOG Compliance Rate by Type - June

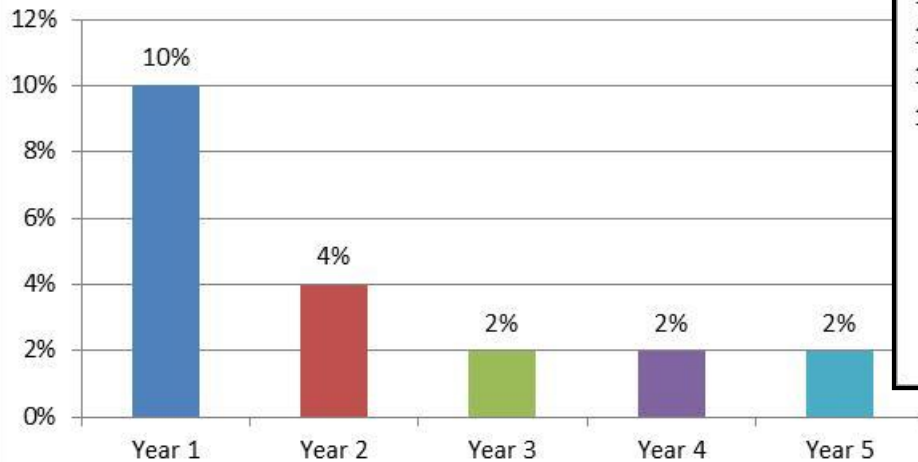


One Program's Results

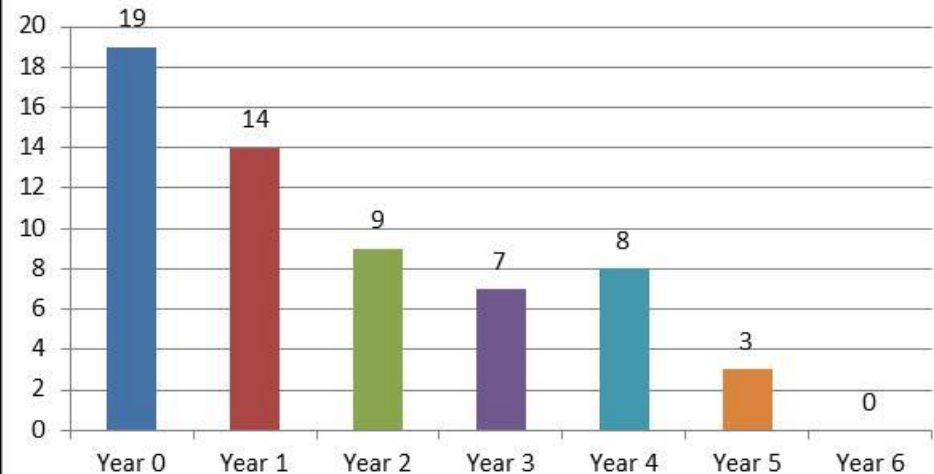
Cumulative % FOG & Solids



% Traps Reported Malfunctional



Commercial FOG Related Sewer Spills



One Program's Results

These results were achieved with:

- ❖ An FSE population of ~3000
- ❖ No increase in utility budget for program or additional fees for FSEs
- ❖ 1.5 full time employees



One Program's Results

Effective FOG Programs can be implemented w/ minimal staff by:

- ❖ Identifying the critical factor
- ❖ Utilizing data to focus compliance efforts
- ❖ Regulating many FSE through a few Preferred Pumpers





Thank You

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