

FOG Program Case Study City of Denton, TX

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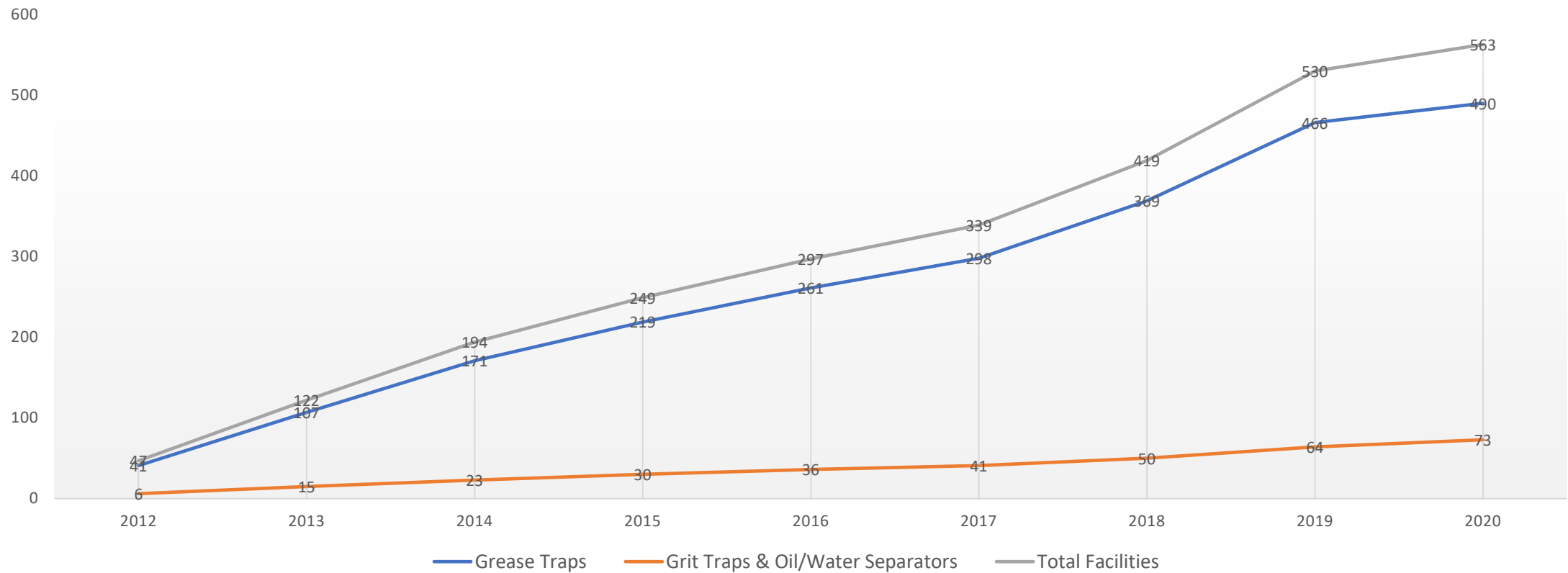
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Municipality at a Glance

- 97.95 square miles of incorporated area
- Population of 139,869 people (2020)
- 574+ Actively Regulated FOG Facilities
- Permitted 21 MGD Flow
- Conventional Activated Sludge Plant
- Council – Manager City Structure
- FOG Generation is year-round
 - Seasonal factors are limited but are based around college campuses within city limits.

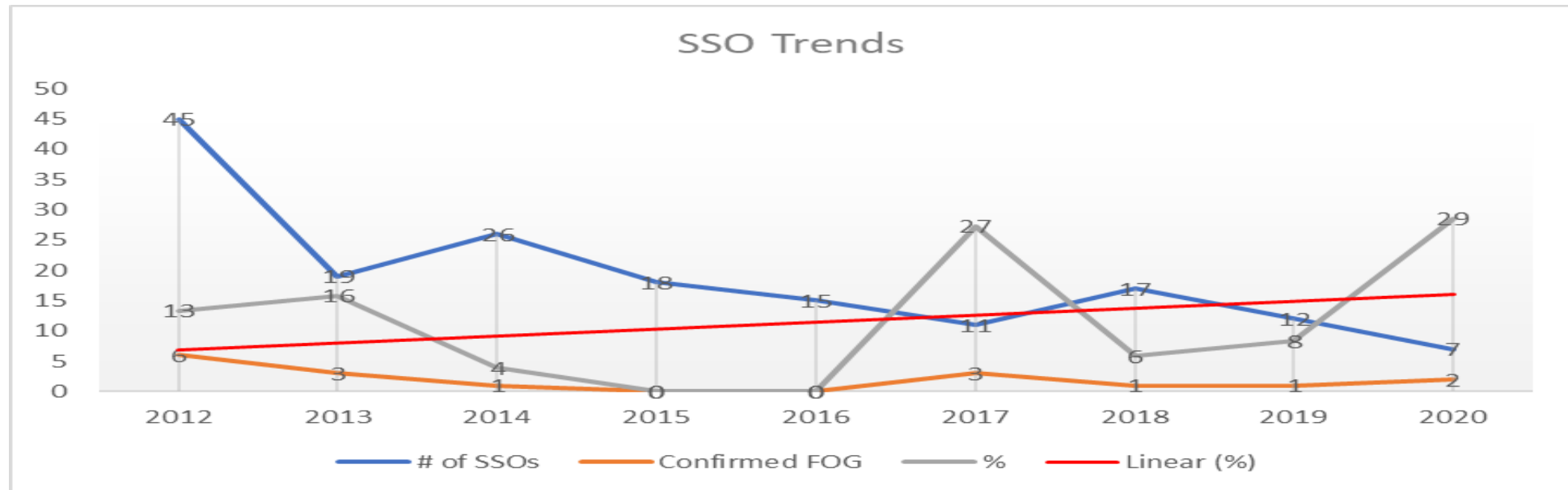
Municipality at a Glance

Distribution of Facilities by Type



Background

- FOG Abatement was necessary as a response to SSOs
- In 2012 – 45 reported SSOs
- After implementation COD averages 15.625 SSOs annually



Project

- FOG program was established via city ordinance 2012-176
- FOG program is implemented with both enforcement and targeted inspections
 - COD has recently implemented practices where P2 staff is notified on grease coding by collections teams for targeted inspections
 - COD engages users with enforcement of pumpout schedules and wetted height standards
- Treatment costs were lowered indirectly via the decrease in maintenance on the collection system. (i.e., vac lift stations / lines)
- Since implementation, there has been a dramatic drop in SSOs (See previous graphic)

Project

- Currently, pollution prevention has 3 full-time staff positions and 1 half-time position.
- Other resources required would be robust liquid waste hauler regulations / oversight

Challenges

- Communicating with internal development staff to ensure that all entities subject to FOG regulations are subject to plan approval by pretreatment staff
- FSE turnover rate necessitates the need for the POTW to frequently visit high generating areas
- Incorporated specific sizing language based on flow rate & grease production
 - Currently, Ordinance is production specific. Flow rate is not accounted for.

Challenges

- Grease trap sizing – as shown – is dependent on type of generator and number of seats.
- Coffee shops are high generators with low occupancy but have drive through and delivery services.
- FOG generation in establishments with low occupancy could necessitate a larger trap.
 - By law, they are required to install a 250-gallon interceptor
 - For these establishments, we typically require increased maintenance on the trap. This results in increased regulatory burden on the city.
- Sizing criteria based on a combination of production and flow would decrease the regulatory burden on the POTW.

3. When a change to a more restrictive class of food service establishment occurs.

Heavy Food Preparation: shall mean any area in which foods are prepared utilizing a grill, griddle, deep-fat fryer, commercial type ovens, and/or any similar food preparation equipment; or any area subject to flooding type of wet cleaning procedures due to the cutting or processing of meat, poultry, fish or pork. Heavy food preparation includes but is not limited to: cafeterias, fast food restaurant, full service restaurants, pizza preparation, donut preparation, and meat and fish markets, etc. either a minimum 750-gallon grease interceptor is required for heavy food preparation establishments with *seating capacity for 50 or more; or a minimum 250-gallon grease interceptor is required for heavy food preparation establishments with a *seating capacity for less than 50 or take-out food service establishments; or the minimum size shall be established by the currently adopted International Plumbing Code; whichever is more stringent.

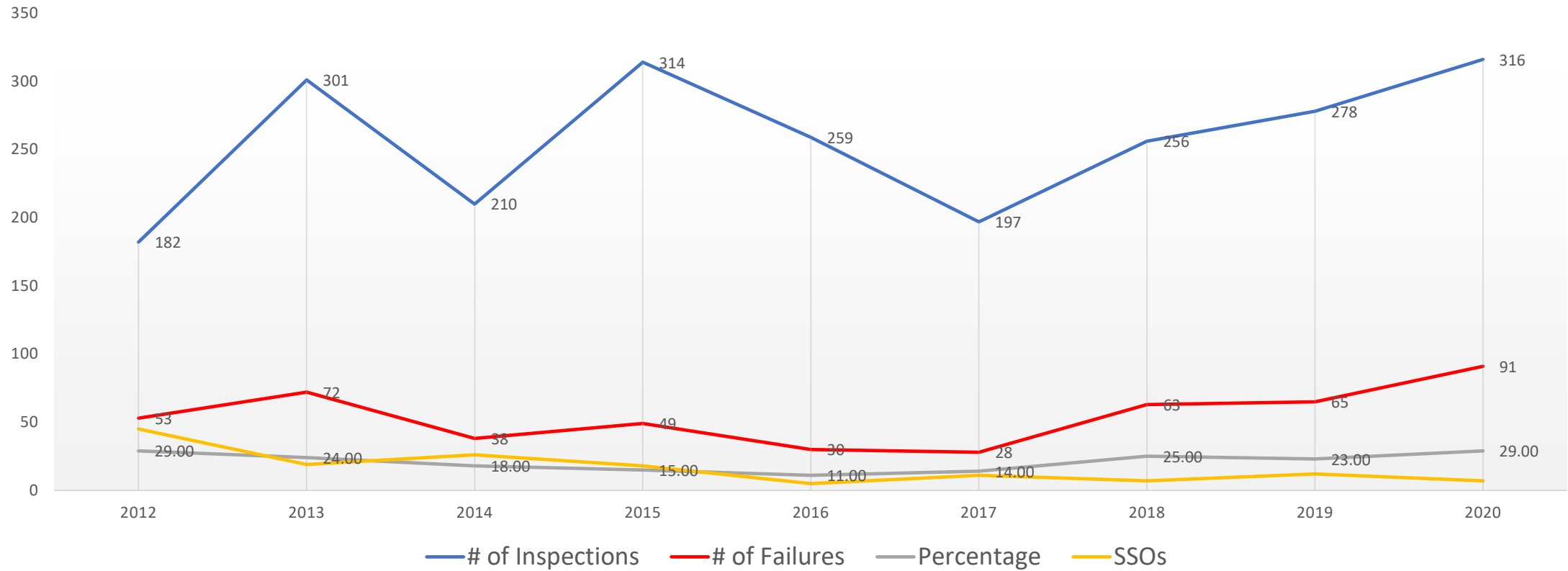
Light Food Preparation: shall mean any area in which foods are prepared exclusive of the use of fryers, grills or similar equipment. Light food preparation is usually limited to the preparation of hot dogs, sandwiches, salads or other similar foods and fountain-type cold drinks. Light food preparation includes, but is not limited to, sandwich shops, limited menu concession stands, etc. Either a minimum 250-gallon grease interceptor is required for light food preparation establishments with *seating capacity for 50 or more; or a minimum 20 gpm flow-through rating or 40-pound retention capacity grease trap is required for light food preparation establishments with a *seating capacity for less than 50 or take-out food service establishments; or the minimum size shall be established by the currently adopted International Plumbing Code; whichever is more stringent.

Key Initiatives for Success

- Changes to the regulatory landscape are always brought about with good data
- City Administration is a key player in the implementing of laws
- Actual program success is defined by influencing the actions of the end user. A successful program is one that partners with the community and educates them on the need for FOG reduction.
- A good metric isn't necessarily % passing inspections. For most programs, the POTW is best served when the pretreatment program is focused on high FOG generating areas.
 - This results in higher failure rate; but serves to protect the collection system from FOG discharges

Inspection Results – SSOs Trend

Inspection Results



Key Initiatives for Success

- As shown above – even as inspection failures increase, SSOs are decreasing overtime.
 - Efforts to inspect “hot-spot” areas result in a larger failure percentage but prevent SSOs

Key Impacts

- Decreased number of SSOs
- Increase of public exposure to the POTW
- Decrease in collection system maintenance costs
 - Lift station pump replacement
 - Gravity main cleanings
 - Wet well cleanings

Data Required

- Historical SSO Data
- Historical Data showing POTW involvement with public
- Historical maintenance costs / coding

Project
Recommendation

FOG / Liquid waste management is a great tool to reduce the amount of SSOs in a services area with large numbers of FSEs.

Explanation of the long-term benefits of FOG reduction to FSEs will not only benefit compliance but will establish rapport with that FSE.

Public buy-in and trust is fundamental to the success of the program. Use the FOG program to partner with FSEs and build that trust.