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**VIA ELECTRONIC CORRESPONDENCE**

June 28, 2019

CCN: 62640  
File No: 8.DC.20.52

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**RE: Consent Decree (Case: No. 1:12-cv-24400-FAM),  
Reference DOJ Case No. 90-5-1-1-4022/1,  
Section VI, - Fats, Oils and Grease (“FOG”) Control Program Paragraph 19(a)  
Second Annual FOG Control Program Review Report**

Dear Sir/Madam:

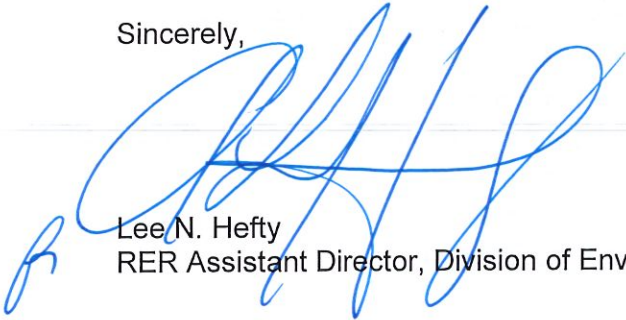
In accordance with the FOG Control Program approved by the United States Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP) on September 7, 2017, Miami-Dade County (County) is submitting the Second Annual FOG Control Program Review Report.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate

and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Should you have any questions regarding this matter, please call me at (305) 372-6754.

Sincerely,



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# Miami-Dade County FOG Control Program

## **2<sup>nd</sup> Annual FOG Control Program Review Report**

June 28, 2019

Prepared by

**Division of Environmental Resources Management (DERM)**

**Miami-Dade County Department of Regulatory and Economic Resources**

Prepared for

United States Environmental Protection Agency and

Florida Department of Environmental Protection

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# 2<sup>nd</sup> Annual FOG Control Program Review Report

**PREPARED BY:**

**Division of Environmental Resources Management (DERM)**

**Miami-Dade County Department of Regulatory and Economic Resources**

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**Status: Final**

Document	2 <sup>nd</sup> Annual FOG Control Program Review		
Ref:	Annual Report	Date:	6-28-2019
Prepared by:	Carlos L. Hernandez, PE		

**Revision History**

Revision	Revision Date	Status	Revised by:	Authorized by:
		Final	Carlos L. Hernandez, PE	Carlos L. Hernandez, PE Water & Wastewater Division

*(Handwritten Signature)*  
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## 1. Introduction

The Miami-Dade County Department of Regulatory and Economic Resources, Division of Environmental Resources Management (DERM) prepared this Annual Fats, Oils, and Grease (FOG) Control Program Review Report (Report) pursuant to Miami-Dade County's FOG Control Program (FCP) and Ordinance (FCO) approved by the United States of America Environmental Protection Agency (EPA) and Florida Department of Environmental Protection (FDEP) on September 7, 2017. The FCO was approved by the Miami-Dade County Board of County Commissioners on February 21, 2018 and became effective on March 5, 2018.

Pursuant to Paragraph 19(a)(xv) of the of the Consent Decree (CD), Case No. 1:12-cv-24400-FAM, DERM's FCP includes an annual review process to evaluate the effectiveness of the FCP and FCO to achieve reductions in FOG discharges to the wastewater collection, transmission and treatment systems (WCTTSs) and thereby reduce sanitary sewer overflows (SSOs) caused by FOG. Performance Measures (PM) and Key Performance Indicators (KPIs) are utilized for this evaluation.

This second annual report represents the first report covering an entire year of implementation of the FCP and FCO.

## 2. Performance Measures (PMs) and Key Performance Indicators (KPIs)

The following PMs and KPIs are being utilized to evaluate the effectiveness of the FCP and FCO and, with other factors, evaluate the need to revise the FCP and/or FCO.

PM	KPI	Method	DERM Target
Collection System SSOs Primarily Caused by FOG		MDWASD Monthly Report/Meeting	Annual Reduction
Collection System Blockages Primarily Caused by FOG		MDWASD Monthly Report/Meeting	Annual Reduction
	Number of FOG Generators without FOG Control Device	FOG Inspections	Annual Reduction None by 2018
	Routine FOG Inspection Frequency	FOG Inspections	100% Annually by September 2019
	FOG Education (Residential)	Education	Six (6) Events Annually Implementation of the program by March 5, 2020 <sup>(1)</sup>
	FOG Stakeholder Outreach (commercial/industrial)	Outreach	Six (6) Events Annually

(1) March 5, 2018 + 24 Months (October 18, 2017 Miami-Dade County FOG Control Program & Proposed FOG Control Ordinance, Section 13.01)

**Table 1. PMs & KPIs**

A summary of select PMs, KPIs and other indicators are discussed below.

### 2.1 Collection System SSOs Primarily Caused by FOG

The total number of SSOs reported by the sixteen (16) Utilities (WASD + 15 Municipal Utilities) has been tracked for the period 2015 to 2018 (refer to **Chart 1**). The data presented in **Chart 1** is primarily from WASD reporting. It is anticipated that as Municipal Utility reporting improves, the number of SSOs may actually increase, and this increase may conceal actual improvements associated with the FCP. For this reason, future reports will breakdown SSOs by each utility and collectively.

Additionally, it is anticipated that several years of data will be required to establish reliable trends. That is, decreases or increases in SSOs may not reflect the impact of the FCP and FCO for a few years after March 2018, the implementation date for the new FCP/FCO.

A summary of findings for SSOs follows:

1. The total number of SSOs reported by the Utilities shows a decrease of 5% for the reporting period 2015 to 2018 (refer to **Chart 1**).
2. The total number of SSOs caused by FOG decreased by 33% for the reporting period 2015 to 2018 (refer to **Chart 1**).

The FCP strategies to reduce FOG related SSOs included front-end (e.g., design standards, more efficient interceptors, and eManifest) and back-end (e.g., Hot Spot reporting) process improvements. Hot Spot reporting continues to be a key area for prevention of SSOs.

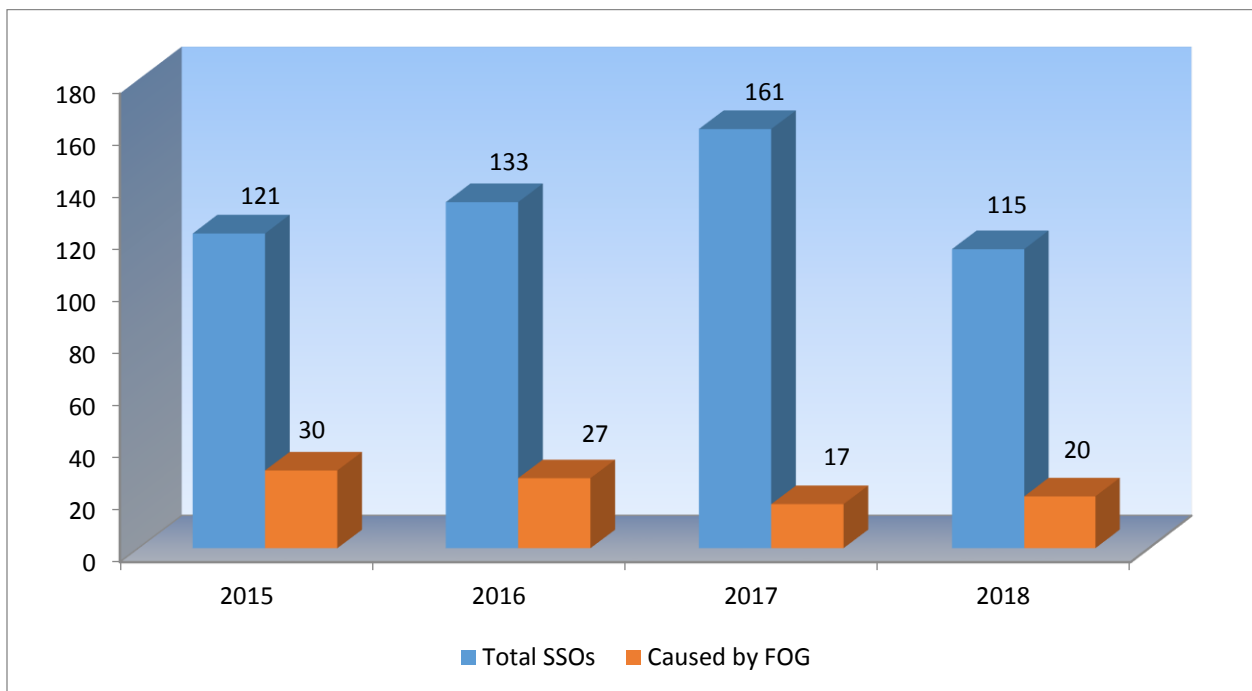
The following are some of the areas inspected during 2018 and 2019 as a result of Hot Spot reports or complaints by Utilities:

- Aragon Alley, City of Coral Gables
- Giralda Avenue and Miracle Mile, City of Coral Gables
- Lincoln Road, City of Miami Beach
- Bal Harbour Shoppes area, Town of Bal Harbour
- NW 183rd St, between 42nd and 47th Ave
- SW 88th St and 99th Ave (shopping Center)
- SW 40th St and 67th Ave
- SW 117th Ave & 72 St
- SW 1st Ave, between 10th St & 11th St, Brickell
- SE 1st Ave, between 3rd and 4th St, Brickell
- 163rd St Intracoastal Mall
- SW 40th St and 79 St. Shopping center
- NW 27 Ave & NW 11 St
- 7100 NW 7 Ave
- 1701 Collins Ave
- 18734 NW 32 PL
- 17500 N. Bay Rd., Sunny Isles Beach
- North Bay Rd /182 ST
- City of Medley, basins #200, 500, FEC-1, FEC-2

A significant change made by WASD to prevent SSOs at known Hot Spots is the use of an integrated real-time level monitoring system (e.g., SmartLevel™/SmartCover) . By incorporating unmanned two-way communication devices at key manholes, WASD can deploy field teams to prevent an SSO based on preset wastewater level alerts and warnings (i.e., wastewater level above invert measured from the bottom of the manhole cover). WASD defines a Hot Spot as a location with three (3) or more SSOs in a period of two (2) years. **Attachment 1** shows WASD

real-time level monitoring system data for the period December 2017 to November 2018. This data shows that during that period, field teams were deployed a total of 38 times to attend to FOG related issues, and thereby preventing the occurrence of SSOs.

Municipal Utilities are notifying DERM of Hot Spots utilizing the monthly Hot Spot Report or FOG complaints (areas of concern). The Municipal Utilities submit a Hot Spot report to DERM on a monthly basis. Currently, the DERM FOG Inspection Group supervisor reviews complaints and prioritizes inspections accordingly. A samples of a Utility Hot Spot reports are included in **Attachment 2**.

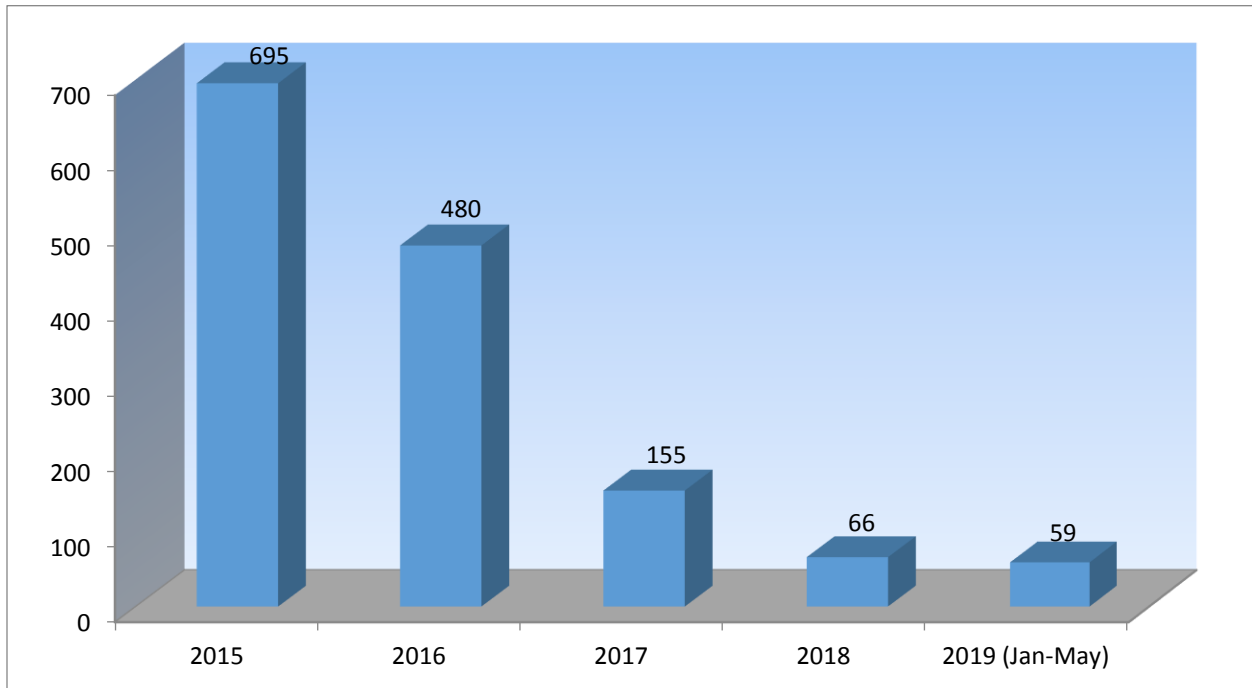


**Chart 1: Sanitary Sewer Overflows**

## 2.2 Number of FOG Generators without FOG Control Device

With the implementation of the new FCP, a key goal has been the reduction in the number of food service establishments (FSEs) operating without a grease interceptor (No Grease Interceptor, NGI). Inspection efforts have focused on bringing these sites into compliance. The ultimate goal is to have zero (0) NGI sites.

The total number of NGI FSEs have decreased from 695 in 2015, to 59 in 2019 (refer to **Chart 2**). This reduction is the result of a coordinated effort involving a significant number of resources working on compliance assistance, technical support and enforcement. DERM will continue to focus resources to accomplishing the goal of zero (0) NGI FSEs.



*Chart 2: Food Service Establishments without a Grease Interceptor*

### 2.3 FOG Program Workforce Analysis

The 1st Annual Report, submitted in June 2018, focused on evaluating staffing resources for routine inspections given the limited data available for complete analysis. In this report, a more detailed analysis was performed that includes a breakdown of workload by specific task/assignments:

- Routine Inspections
- Hot Spots & Complaints Inspections
- Construction Inspections
- Confirmation Inspections
- FOG Disposal Facility Inspections
- Residential Areas Inspections
- eManifest Inspections



The current staffing level for the FCP includes eight (8) Environmental Technician II positions (seven (7) full time and one (1) vacancy due to staff promotion), four (4) Pollution Control Inspector I positions (three (3) full time and one (1) vacancy due to staff promotion), two (2) full time supervisors and one (1) Program Manager (Engineer III).

Workload data (by inspection category/assignments) for years 2017 to 2019 was reviewed and analyzed to estimate full time equivalent workforce requirements for a period of ten (10) years (2017-2027). A discussion of each inspection category, tabulated summary and assumptions (**Tables 2** and **3**) follow below.

### 2.3.1 Routine Inspections

The FCP included performing routine inspections of facilities with Grease Discharge Operating (GDO) operating permits starting after September 30, 2019. As of April 30, 2019, there were 7,424 GDO permitted facilities. The total number of GDO sites has been increasing at an average annual rate of approximately four (4) percent (refer to **Chart 3**).

Recognizing that the number of GDOs would not be stagnant, the FCP included a ratio of one (1) technician/inspector for approximately 700 GDOs (1:700).

Based on 42 working weeks per year and 4 inspection days per week, 7.4 FTEs technicians will be required at 6 inspections per day, and 3.3 FTE inspectors at 4 inspections per day, in 2019. Inspectors will support about 30% of the total routine inspections.

### 2.3.2 Hot Spots & Complaints Inspections

Hot Spots inspections result from request from the Utilities to determine possible GDO facilities causing FOG discharges in specific areas. Complaints inspections are conducted based on private and municipal complaints.

Based on 42 working weeks per year and 4 inspection days per week, and estimating a total of 336 inspections per year, 1.0 FTEs technicians and 1.0 FTE inspectors will be required at 2 inspections per day, in 2019.

### 2.3.3 Construction Inspections

Starting March 2018, with the approval of the FCO, DERM began performing construction inspections to confirm compliance with approved plans.

Based on 42 working weeks per year and 4 inspection days per week, and a total of 559 inspections per year in 2019 (linear projection data from January to May 2019, **Chart 4**), 0.8 FTE inspectors will be required at 3 inspections per day.

A 10% increase in annual construction inspections was used to estimate FTEs for years 2020 to 2023 based on the estimated increase in plan submittals/approvals.

### 2.3.4 Confirmation Inspections

Currently there are a total of 4,912 facilities pending confirmation inspection to determine if they are operating without a permit or closed (**Chart 3**).

Based on 42 working weeks per year and 4 inspection days per week, and assuming that 50% of the 4,912 total facilities will be inspected in 2019, 1.8 FTE technicians will be required at 8 inspections per day.

A 10% annual decrease in the number of confirmation inspections required was used to estimate FTEs for years 2019 to 2023.

### 2.3.5 FOG Disposal Facility Inspections

To prevent/minimize comingling of FOG with septage, educate liquid waste haulers in the use of appropriate eManifest forms, and to improve the disposal process at the wastewater treatment plant, DERM started performing inspections of liquid waste haulers at the South District Wastewater Treatment Plant (SDWWTP) hauled waste disposal facility in 2018.

Based on 42 working weeks per year and 4 inspection days per week, and a total of 64 inspections per year in 2019 (one day per weekday and every Saturday), 0.4 FTE technicians will be required at 1 (8 hour) inspection per day (including travel time).

Beginning in 2019/2020, DERM expects to have a technician present at the SDWWTP two days per weekday and every Saturday. This increase is required based on observed liquid waste hauler non-compliance. Furthermore, due to concerns of potential inappropriate dumping, additional inspections are required after regular working hours. The latter is further discussed in **Section 4** below.

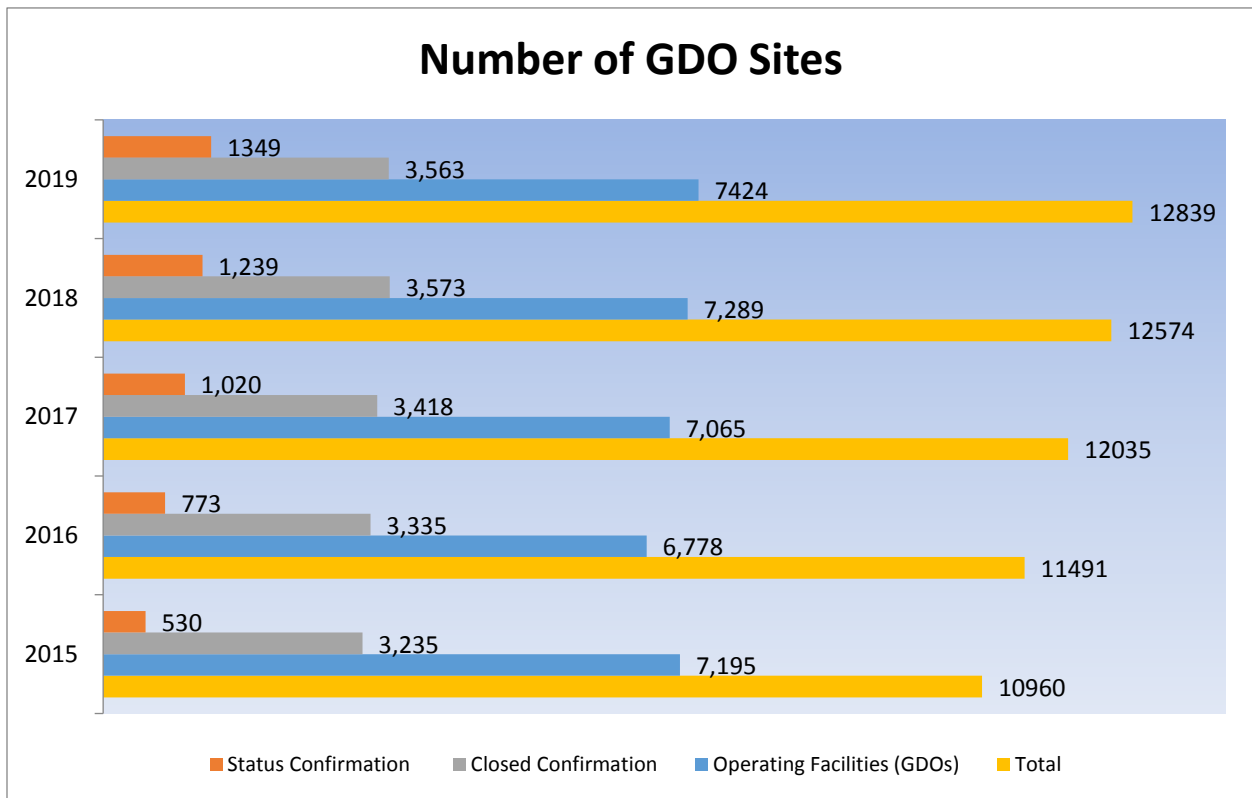
### 2.3.6 Residential Areas Inspections

Some blockages caused by FOG reported by the utilities are in residential areas. DERM estimates that one FTE inspector and one FTE technician will be required to address these blockages.

### 2.3.7 eManifest Inspections

Liquid waste haulers and GDO facilities are required to submit information to DERM using the eManifest system. The system generates reports of potential violations that require review and inspection.

DERM estimated that one inspector and one technician will be dedicated to this task on a one (1) week per month basis, which is equivalent to 0.36 FTE inspector and 0.36 FTE technician.



**Chart 3: Number of Grease Discharge Operating Permits**

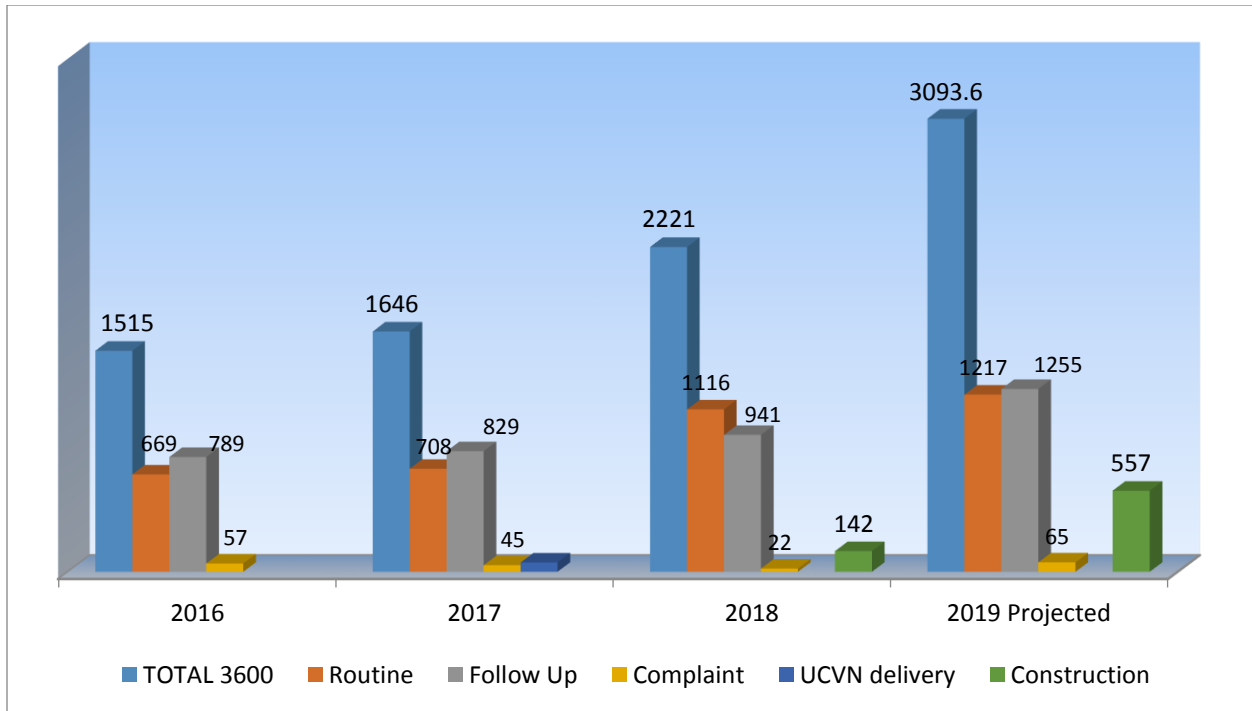


Chart 4: Number of Inspections per Year

<b>Weeks/Year =</b>	<b>52 weeks</b>	<b>Inspections/day =</b>	<b>6 per inspector</b>
<b>Holidays =</b>	2 weeks	Inspection days/week =	4 per inspector
<b>Annual Leave =</b>	2 weeks	Inspections/week =	24 per inspector
<b>Sick Leave =</b>	2 weeks	No. Inspections/year =	1008 per inspector
<b>FOG Training =</b>	2 week	No. Inspectors =	<b>19</b>
<b>Other Training =</b>	2 week	No. Inspections & Re-inspections/year projected for 2019 =	<b>13,295</b>
<b>Annual Work =</b>	<b>42 weeks</b>		

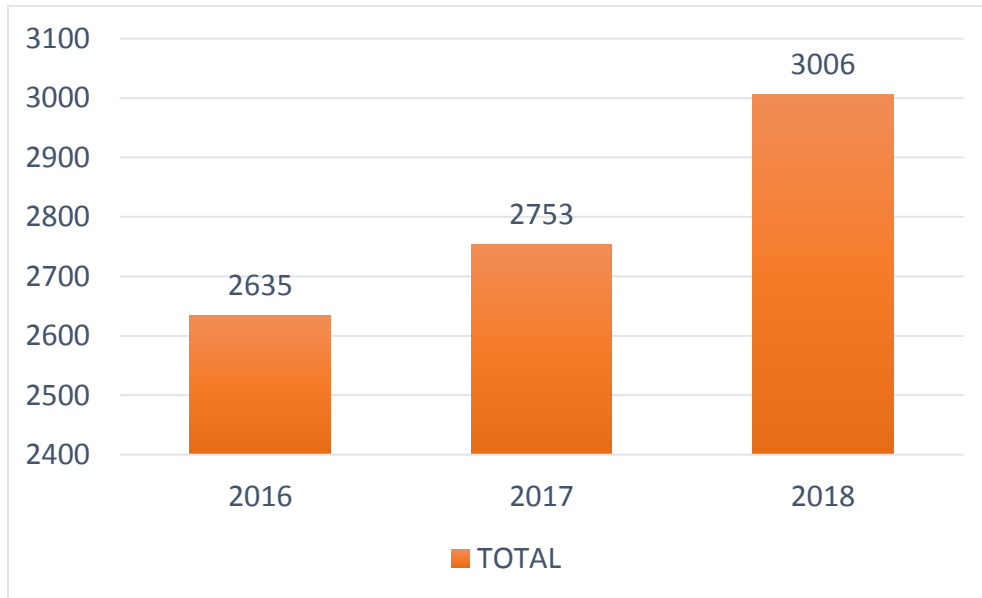
Table 2: Staffing Calculations

Year -->		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
GDOs -->		7,065	7,289	7,424	7,647	7,877	7,877	7,877	7,877	7,877	7,877	7,877
Hot Spots -->		336	336	336	336	336	336	336	336	336	336	336
Status Confirmation -->		--	--	1349	1215	1094	985	887	887	887	887	887
Closed Confirmation -->		--	--	3563	3207	2887	2599	2340	2340	2340	2340	2340
Construction Inspections -->		--	--	559	615	677	745	820	820	820	820	820
FOG Disposal Facility Inspections -->		--	32	64	116	116	116	116	116	116	116	116
Total -->		7401	7,657	13,295	13,136	12,987	12,658	12,376	12,376	12,376	12,376	12,376
Inspection Category	Classifications	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Routine	Fog Technician	0.0	0.0	7.4	7.6	7.8	7.8	7.8	7.8	7.8	7.8	7.8
	FOG Inspector	0.0	0.0	3.3	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Subtotal	0.0	0.0	10.7	11.0	11.3	11.3	11.3	11.3	11.3	11.3	11.3
Hotspots & Complaints	Fog Technician	4.0	8.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	FOG Inspector	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Construction Inspections	Fog Technician	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	FOG Inspector	2.0	2.0	0.8	1.2	1.3	1.5	1.6	1.6	1.6	1.6	1.6
Confirmation	Fog Technician	0.0	0.0	1.8	1.6	1.5	1.3	1.2	1.2	1.2	1.2	1.2
	FOG Inspector	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FOG Disposal Facility	Fog Technician	0.0	45.6	79.1	78.2	77.3	75.3	73.7	73.7	73.7	73.7	73.7
	FOG Inspector	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residential	Fog Technician	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
	FOG Inspector	0.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
eManifest	Fog Technician	0.0	0.0	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
	FOG Inspector	0.0	0.0	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Total Technicians		4.0	8.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Total Inspectors		2.0	4.0	7.0	7.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Supervisors		1	2	3	3	3	3	3	3	3	3	3
Grand Total		7	14	22	22	23	23	23	23	23	23	23

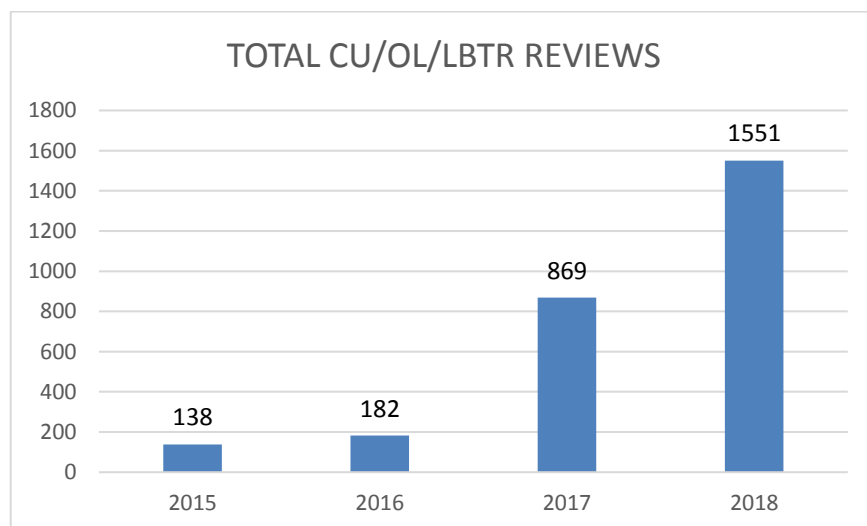
**Table 3. 10 Years FOG Inspections FTEs**

## 2.4 FOG Construction Plans and Certificate of Use Reviews

An indicator of future increases (or declines) in the total of GDO facilities is the number of construction plans and certificate of use submittals. From 2016 to 2017 construction plan submittals increased by 4%, and from 2017 to 2018 a 9% increase was observed (**Chart 5**). The certificate of use applications increased by 78% from 2017 to 2018 (**Chart 6**). These indicators and number of GDOs will be tracked regularly to evaluate staffing and equipment needs. With the current trends, staffing and equipment needs will be evaluated to have an effective FCP.



**Chart 5: Total FOG Engineering Reviews (Overtown & PIC)**



**Chart 6: Occupational License, Certificate of Use Reviews (Overtown & PIC)**

## 2.5 FOG Outreach and Education Events

DERM has focused on FOG outreach and education since 2014 and has exceeded the FCP target of six (6) stakeholder outreach events per year (refer to **Table 4**). As proposed in the FCP, DERM will expand the current Miami-Dade County (WASD) residential FOG outreach program by March 2020. The expansion will include an educational campaign to address blockages caused by the combination of “flushable wipes” and FOG, which was one of the concerns expressed by the Utilities during the FOG Annual Review meeting held on June 18, 2019.

YEAR	NUMBER
2014	15
2015	20
2016	18
2017	12
2018	19

*Table 4: Outreach Events*

## 3. FOG Control Program Review Committee

The effectiveness of the FCP and FCO are continuously evaluated at the DERM Division Level (i.e., DERM Water and Wastewater Division). An annual review of the FCP effectiveness is performed by the FOG Control Program Review Committee (committee). The committee is composed of five members, each from one of the following Departments/Sections:

- DERM Water and Wastewater Division (formerly the Wastewater Permitting Section)
- DERM Director or Director’s Designee
- RER Administration
- Miami-Dade County Water and Sewer Department, Wastewater Collection and Transmission Line Division
- City of Miami Beach, the selected Volume Sewer Customer (Municipal Utility)

The committee meeting was held on June 18, 2019. The presentation and meeting materials are included in **Attachment 3**.

The committee also reviewed the progress made by DERM to implement the program requirements. A summary of DERM's progress is included in **Table 5**.

FOG Implementation Schedule		
Requirement	Requirement or Goal Date	Status
No Commingling of FOG and septage	April 1, 2017	Implemented
DERM to make training materials available for FOG generators (e.g., food service establishments), liquid waste transporters and FOG disposal facilities	February 21, 2019	Implemented
DERM to implement an electronic disposal manifest system, replacing the paper based system implemented April 1, 2015	April 1, 2017	Implemented
DERM to perform compliance assistance visits to active FSEs to promote awareness of the requirement to report electronically	October 10, 2017	Implemented
Require FSEs to utilize eManifest system (date the grease interceptor was pumped out and the name of the Liquid Waste Transporter).	January 1, 2018	Implemented
DERM to finalize procedures and checklist for Construction Inspections to be performed by RER.	January 30, 2018	Implemented
Guidelines for the Monthly Hot Spots Report will be made available to the Utilities.	January 30, 2018	Implemented
RER to perform FOG Control Device (grease interceptor) Construction Inspections for all plans approved under FOG 2.0 (i.e., all plans approved pursuant to Section 24-42.6, as enacted by County Ordinance).	March 5, 2018	Implemented
Monthly Hot Spots Report will be submitted by the Utilities per requirements in Section 24-42.6(13)	March 5, 2018	Implemented
Compliance Inspections to FSEs will be conducted annually.	September 30, 2019	Pending
To comply with Section 24-42.6(10)(iv) each FOG generator and FOG control device operator shall have one (1) trained person in the staff with knowledge in FOG reporting and maintenance requirements.	January 1, 2019	Training materials made available

**Table 5: FOG Implementation Schedule**

After reviewing and discussing performance measures (PMs) and key performance indicators (KPIs), the committee made recommendations which were captured in the committee input matrix (refer to **Attachment 4**). The input matrix addressed:

1. What is Your No. 1 FOG Concern?
2. If you can change One thing, what would it be?
3. Are Existing PMs/KPIs good indicators?
4. Should we add New PM/KPI?
5. Other Comments?



Utilities expressed concern with the impact of “flushable wipes” and FOG on the sewer collection (blockages) and transmission (pump clogging) system. These products are advertised as flushable, but the reality is that combined alone – or with FOG - they produce blockages in the sewer system and starve/block pump inlets or bind impellers. Utilities were also concerned with industrial food processing facilities, which are major producers of FOG and therefore a potentially significant source of blockages/SSOs.

With regards to PMs/KPIs, RER Director’s office proposed including volume of hauled waste as a secondary KPI, as an indicator of FOG control devices pump out (cleaning) frequency compliance. This indicator is currently tracked and will be included in future reports.

The committee had no recommendations at this time concerning the implementation schedule.

#### **4. Proposed FCO and FCP Revisions**

The FCO became effective in March 2018 and no changes are currently proposed. DERM will continue to monitor all areas of the FCO (e.g., design standards, plan review, construction inspections, operating permits, etc.) routinely to ascertain if any changes are required. Prior to making any changes to the FCO, which would require Board of County Commissioner approval, an Ordinance Revision Plan (ORP) will be submitted to FDEP and EPA for review and approval. The ORP would include, at a minimum, the regulatory and technical basis for the proposed changes and implementation schedule (e.g., public outreach, public comment, legislative timeframes, and code implementation timeline with change applicability and grandfathering criteria).

Based on working knowledge gained by implementing the FCP, some adjustments are proposed for the FCP. These are limited to inspection strategies related to staffing resources, including inspections at the SDWWTP hauled waste disposal facility.

DERM’s inspection protocol for 2017 and 2018 included focusing primarily on Hot Spots and Complaints and starting to transition more staff resources to routine inspections in late 2019, with the goal of initiating annual inspections by September 30, 2019. Given the level of effort required to address Hot Spots and Complaints, expanding SDWWTP inspections, eManifest

enforcement/inspections, and construction inspections/re-inspections, shifting resources to annual inspections is not warranted at this time. Moreover, based on the projected workload for all inspection categories, additional staffing will be required to meet all inspection goals through 2023. However, since these projections are still based on a limited period of record, further evaluation is required before significant staffing level increases are implemented to meet future workload. It is, however, evident that additional resources are required in the short term – not just long term, and as such, additional resource needs continue to be evaluated.

One particular area that requires further evaluation is inspections after regular working hours. Based on observations and communication with disposal facility staff, there is a significant concern of potential inappropriate dumping resulting from haulers not being able to dispose of waste after 10 pm. The SDWWTP hauled waste disposal facility is the only legal place to dispose of hauled waste in the County and has regular operating hours of 6:00 AM to 10:00 PM. Given the requirement of many FSEs, that haulers perform pump-out/cleaning several hours after closing (to not offend customers), many haulers must wait to the following day to dispose of waste. This, coupled with emergency pumping at night to address backups during closing - a peak time for blockages caused by cleaning crews disposing of yellow grease and debris into the grease waste drain(s) – there is significant pressure for some haulers to dump waste directly into the collection system since they need to empty trucks to handle additional loads. Recognizing the potential for inappropriate dumping, and the negative impact this can have on the collection/transmission system, DERM is considering performing some after-hour inspections.

Additionally, WASD is evaluating the establishment of separate hours, between 10:01 PM and 5:59 AM, available to haulers who request this service in advance. This would facilitate hauler dumping of waste and thereby improve the effectiveness of the overall FCP.

## 5. Conclusions

DERM implemented the FCP to reduce FOG discharges to the WCTTS and thereby reduce FOG related SSOs. While the FCP and FCO have only recently been approved, DERM has made great progress improving key functions: Design/Review, Compliance/Construction Inspections, FOG Manifesting (i.e., eManifest) and Outreach.

DERM will continue to make progress implementing the FCP and enforcing the FCO, and when applicable, propose changes to the EPA and FDEP.

# ATTACHMENTS

**ATTACHMENT 1**  
**Data from MDWASD Real-Time Level**  
**Monitoring Program**

# Smartcover Analysis

Location	Deployed by:		O&M Annual Cost		Total Annual Cost Including Smartcover Unit
	FOG	Debris	FOG 12/01/17 to 11/30/18	Debris 12/01/17 to 11/30/18	
Basin 0001A MH 790	1	1	\$ 800.00	\$ 800.00	\$ 2,758.46
Basin 0001B MH 1453			\$ -	\$ -	\$ 1,158.46
Basin 0001B MH 2477		3	\$ -	\$ 2,400.00	\$ 3,558.46
Basin 0001C MH 530	3	2	\$ 2,400.00	\$ 1,600.00	\$ 5,158.46
Basin 0001D MH 80			\$ -	\$ -	\$ 1,158.46
Basin 0002B MH 1081			\$ -	\$ -	\$ 1,158.46
Basin 0002C MH 751	2	2	\$ 1,600.00	\$ 1,600.00	\$ 4,358.46
Basin 0010A MH 93			\$ -	\$ -	\$ 1,158.46
Basin 0042A MH 194			\$ -	\$ -	\$ 1,158.46
Basin 0054A MH 255	1	1	\$ 800.00	\$ 800.00	\$ 2,758.46
Basin 0055A MH 28	1	1	\$ 800.00	\$ 800.00	\$ 2,758.46
Basin 0062A MH 186			\$ -	\$ -	\$ 1,158.46
Basin 0064A MH 6			\$ -	\$ -	\$ 1,158.46
Basin 0073 MH 44			\$ -	\$ -	\$ 1,158.46
Basin 0105A MH 9			\$ -	\$ -	\$ 1,158.46
Basin 0130 MH 44	2	1	\$ 1,600.00	\$ 800.00	\$ 3,558.46
Basin 0135A MH 29			\$ -	\$ -	\$ 1,158.46
Basin 0136A MH 51		1	\$ -	\$ 800.00	\$ 1,958.46
Basin 0190A MH 115			\$ -	\$ -	\$ 1,158.46
Basin 0190A MH 61			\$ -	\$ -	\$ 1,158.46
Basin 0301A MH 111	3	3	\$ 2,400.00	\$ 2,400.00	\$ 5,958.46
Basin 0301A MH 119			\$ -	\$ -	\$ 1,158.46
Basin 0349A MH 39	4	1	\$ 3,200.00	\$ 800.00	\$ 5,158.46
Basin 0359 MH 15			\$ -	\$ -	\$ 1,158.46
Basin 0364A MH 47			\$ -	\$ -	\$ 1,158.46
Basin 0415A MH 170	2		\$ 1,600.00	\$ -	\$ 2,758.46
Basin 0467 MH 9		1	\$ -	\$ 800.00	\$ 1,958.46
Basin 0467A MH 13			\$ -	\$ -	\$ 1,158.46
Basin 0467A MH 46	1		\$ 800.00	\$ -	\$ 1,958.46
Basin 0467A MH 66		1	\$ -	\$ 800.00	\$ 1,958.46
Basin 0467A MH 67			\$ -	\$ -	\$ 1,158.46
Basin 0467A MH 77		3	\$ -	\$ 2,400.00	\$ 3,558.46
Basin 0476A MH 10			\$ -	\$ -	\$ 1,158.46
Basin 0476A MH 50		1	\$ -	\$ 800.00	\$ 1,958.46
Basin 0476A MH 62			\$ -	\$ -	\$ 1,158.46
Basin 0477 MH 89		1	\$ -	\$ 800.00	\$ 1,958.46
Basin 0501A MH 73			\$ -	\$ -	\$ 1,158.46

<h1>Smartcover Analysis</h1>					
Location	Deployed by:		O&M Annual Cost		Total Annual Cost Including Smartcover Unit
	FOG	Debris	FOG 12/01/17 to 11/30/18	Debris 12/01/17 to 11/30/18	
Basin 0513A MH 46			\$ -	\$ -	\$ 1,158.46
Basin 0571A MH 121	1	1	\$ 800.00	\$ 800.00	\$ 2,758.46
Basin 0594 MH 18			\$ -	\$ -	\$ 1,158.46
Basin 0612 MH 43			\$ -	\$ -	\$ 1,158.46
Basin 0613 MH 36			\$ -	\$ -	\$ 1,158.46
Basin 0615 MH 9			\$ -	\$ -	\$ 1,158.46
Basin 0616 MH 26			\$ -	\$ -	\$ 1,158.46
Basin 0617 MH 2			\$ -	\$ -	\$ 1,158.46
Basin 0618 MH 6			\$ -	\$ -	\$ 1,158.46
Basin 0621 MH 33			\$ -	\$ -	\$ 1,158.46
Basin 0628 MH 6			\$ -	\$ -	\$ 1,158.46
Basin 0639A MH 26	3		\$ 2,400.00	\$ -	\$ 3,558.46
Basin 0639A MH 58			\$ -	\$ -	\$ 1,158.46
Basin 0642A MH 61			\$ -	\$ -	\$ 1,158.46
Basin 0645A MH 12	3		\$ 2,400.00	\$ -	\$ 3,558.46
Basin 0649A MH 23			\$ -	\$ -	\$ 1,158.46
Basin 0650A MH 41			\$ -	\$ -	\$ 1,158.46
Basin 0662A MH 14			\$ -	\$ -	\$ 1,158.46
Basin 0666A MH 47	1		\$ 800.00	\$ -	\$ 1,958.46
Basin 0732A MH 12			\$ -	\$ -	\$ 1,158.46
Basin 0786A MH 12	2		\$ 1,600.00	\$ -	\$ 2,758.46
Basin 0806 MH 21		2	\$ -	\$ 1,600.00	\$ 2,758.46
Basin 0806A MH 7			\$ -	\$ -	\$ 1,158.46
Basin 0808 MH 10	3	1	\$ 2,400.00	\$ 800.00	\$ 4,358.46
Basin 0808A MH 14	1		\$ 800.00	\$ -	\$ 1,958.46
Basin 0809A MH 81			\$ -	\$ -	\$ 1,158.46
Basin 0880A MH 72			\$ -	\$ -	\$ 1,158.46
Basin 0898 MH 24			\$ -	\$ -	\$ 1,158.46
Basin 1007 MH 224	1		\$ 800.00	\$ -	\$ 1,958.46
Basin 1028A MH 44	1		\$ 800.00	\$ -	\$ 1,958.46
Basin 1037A MH 13			\$ -	\$ -	\$ 1,158.46
Basin 1044A MH 7			\$ -	\$ -	\$ 1,158.46
Basin 1079A MH 82			\$ -	\$ -	\$ 1,158.46
Basin 21 MH 00A			\$ -	\$ -	\$ 1,158.46
Basin 72 MH 448	1		\$ 800.00	\$ -	\$ 1,958.46
Basin 14 MH 49	1		\$ 800.00	\$ -	\$ 1,958.46
<b>Total</b>	<b>38</b>	<b>27</b>	<b>\$ 30,400.00</b>	<b>\$21,600.00</b>	<b>\$ 136,567.58</b>

# ATTACHMENT 2

## Sample of Utility Hot Spot Report



**Accelerated FOG Maintenance (aFOG)<sup>1</sup> Report  
MDC Code Section 24-42.6(13)**

**Utility Name:** City of Miami Beach  
**Month Reported:** 05/01/19  
**Completed by:** Kristina Nunez

Utility Code	Date of Maintenance mm/dd/yyyy	Maintenance Location (address)	ZIP code	X, Coordinate (Feet)	Y, Coordinate (Feet)	Causes <sup>*2</sup>	Maintenance Initial MH #	Maintenance Final MH #	Length of Pipe Cleaned (Feet)	Description of Maintenance Performed <sup>*3</sup>	List of complete name of Chemicals added	Volume Recovered for Disposal (gallons) <sup>*4</sup>	Liquid Waste Transporter DERM Permit LW-ST #	Disposal Ticket No. <sup>*5</sup>	Maintenance Cost <sup>*6</sup> Labor	Maintenance Cost <sup>*6</sup> Equipment	Maintenance Cost <sup>*6</sup> Materials/Supplies	Total Maintenance Cost
2	05/09/19	1427 West Avenue	33139	938490.126	528882.77	FOG	SWR23253	SWR23253	25	Hydro Jetting		2,100	372	311802	\$ 17.23	\$ 32.25		\$ 49.48
2	05/11/19	1580 Washington Avenue	33139	941769.74	529926.057	FOG	SWR44497	SWR47841	400	Hydro Jetting		1,050	372	312839	\$ 23.38	\$ 32.25		\$ 55.63
2	05/11/19	6651 Allison Road	33141	944124.626	552280.734	FOG	SWR26043	SWR26043	40	Hydro Jetting		1,050	372	312839	\$ 23.38	\$ 32.25		\$ 55.63
2	05/21/19	705 Jefferson Avenue	33139	940162.022	525627.155	FOG	SWR43451	SWR43452	300	Hydro Jetting		1,050	372	313318	\$ 59.00	\$ 58.13		\$ 117.13
2	05/22/19	2400 Pine Tree Drive	33140	942426.393	534877.307	FOG	SWR47304	SWR47305	415	Hydro Jetting	HTC	1,050	372	313318	\$ 65.29	\$ 64.33		\$ 129.62

**NOTES**  
<sup>\*1</sup> Cleaning performed by utilities to prevent sanitary sewer overflows caused by FOG blockages in sanitary sewer systems, including but not limited to laterals, gravity mains, pump stations, and air release valves  
<sup>\*2</sup> Causes  
 FOG  
 FOG & Rags (FROG)  
 FOG & Roots  
 Other  
<sup>\*3</sup> Description of accelerated FOG maintenance performed :  
 Hydro Jetting  
 Pipe replaced due to grease solidified  
 Chemicals added  
 Other  
<sup>\*4</sup> Quantities of waste removed, recovered, collected or treated to prevent a sanitary sewer overflow  
<sup>\*5</sup> Disposal Ticket No., Must be reported from the Manifest form used to bring the waste to the disposal facility (Treatment plant). See sample form in the next TAB "Sample Disposal Manifest Form"  
<sup>\*6</sup> Cost of accelerated FOG maintenance including labor, equipment, and materials. Labor shall include field and office staff

**ATTACHMENT 3**  
**2<sup>nd</sup> FOG Control Program Review**  
**Committee Meeting Materials**



# **MDC – FOG Control Program 2<sup>nd</sup> Annual Review June 18, 2019**

Water and Wastewater Division  
Department of Regulatory and Economic Resources (RER)  
Division of Environmental Resources Management (DERM)

# AGENDA

## 2<sup>nd</sup> Annual FOG Control Program Review

- **Participants:**

- Rashid Istambouli, PE (DERM Director's Designee)
- Alexi Manresa (RER Administration)
- Carlos Hernandez, PE (DERM Water and Wastewater Division)
- Galo Pacheco, PE (DERM Water and Wastewater Division)
- Rosa Areas (DERM Water and Wastewater Division)
- Laura Castillo (DERM Water and Waste Water Division)
- Ashton Youngquist (DERM Water and Wastewater Division)
- Derrick Roby (DERM Permitting Section)
- Roberto Abrahante (DERM Plan Review Section)
- Anthony Hung (DERM Plan Review Section)
- Enrique Cuellar (DERM Plan Review Section)
- Carlos Lincheta (DERM Water and Wastewater Division)
- Nadia Ramnanan (DERM Water and Wastewater Division)
- Elsa Cabrejo, PE (DERM Water and Wastewater Division)
- Oscar Vasquez (WASD)
- Margarita Kruffyff, City of Miami Beach (Municipal Utility)
- Elizabeth Wheaton, City of Miami Beach (Municipal Utility)

- **FOG Team**

- **Today's Meeting Objectives**

- **DERM Requirements Under EPA Consent Decree Case: No. 1:12-cv-24400-FAM**

- **FOG Control Program Key Performance Indicators (KPI)**

- **Committee members comments**

- **Schedule date for next meeting**

# FOG Team Members

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# FOG Team Members

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FOG Permitting	Derrick Roby <a href="mailto:Derrick.Roby@miamidade.gov">Derrick.Roby@miamidade.gov</a> Jim Ernst (LWT) <a href="mailto:Jim.ernst@miamidade.gov">Jim.ernst@miamidade.gov</a> Leonor Valdes <a href="mailto:Leonor.Valdes@miamidade.gov">Leonor.Valdes@miamidade.gov</a>

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Special Projects Administrator	JoAnne Clingerman <a href="mailto:JoAnne.Clingerman@miamidade.gov">JoAnne.Clingerman@miamidade.gov</a>
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# Long Term & Today's Meeting Objectives

- Evaluate/measure the FOG Control Program's Effectiveness using Performance Measures (PMs) and Key Performance Indicators (KPIs).
- Evaluate FOG inspection compliance and compliance assistance effectiveness in reducing wastewater collection and transmission system blockages and sanitary sewer overflows (SSOs).
- *Allocate/Re-allocate resources to maximize effectiveness.*



# Long Term & Today's Meeting Objectives

- Discuss how Performance Measures (PMs) and Key Performance Indicators (KPIs) will be measured, tracked, and evaluated.
- Discuss role of each committee member (e.g., WASD, Miami Beach, ...).
- Discuss how we will *Allocate/Re-allocate resources to maximize effectiveness.*

# DERM Requirements Under EPA Consent Decree Case: No. 1:12-cv-24400-FAM

Case 1:12-cv-24400-FAM Document 25-1 Entered on FLSD Docket 06/06/2013 Page 1 of 101

IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF FLORIDA

UNITED STATES OF AMERICA, )  
the STATE OF FLORIDA DEPARTMENT )  
OF ENVIRONMENTAL PROTECTION, )  
and the STATE OF FLORIDA, )  
Plaintiffs, )

v. )

MIAMI-DADE COUNTY, )  
FLORIDA, )  
Defendant. )

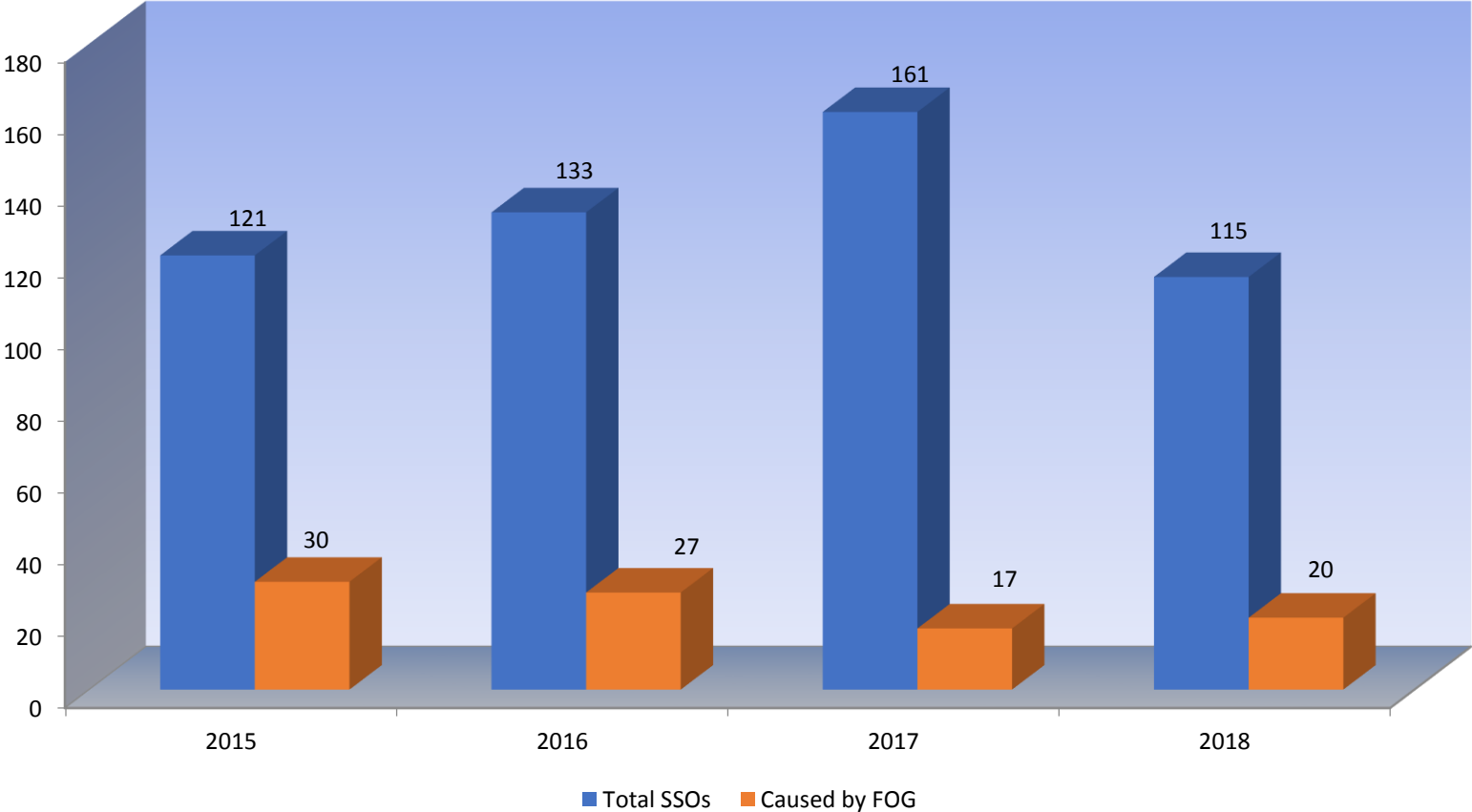
Case: No. 1:12-cv-24400-FAM

CONSENT DECREE

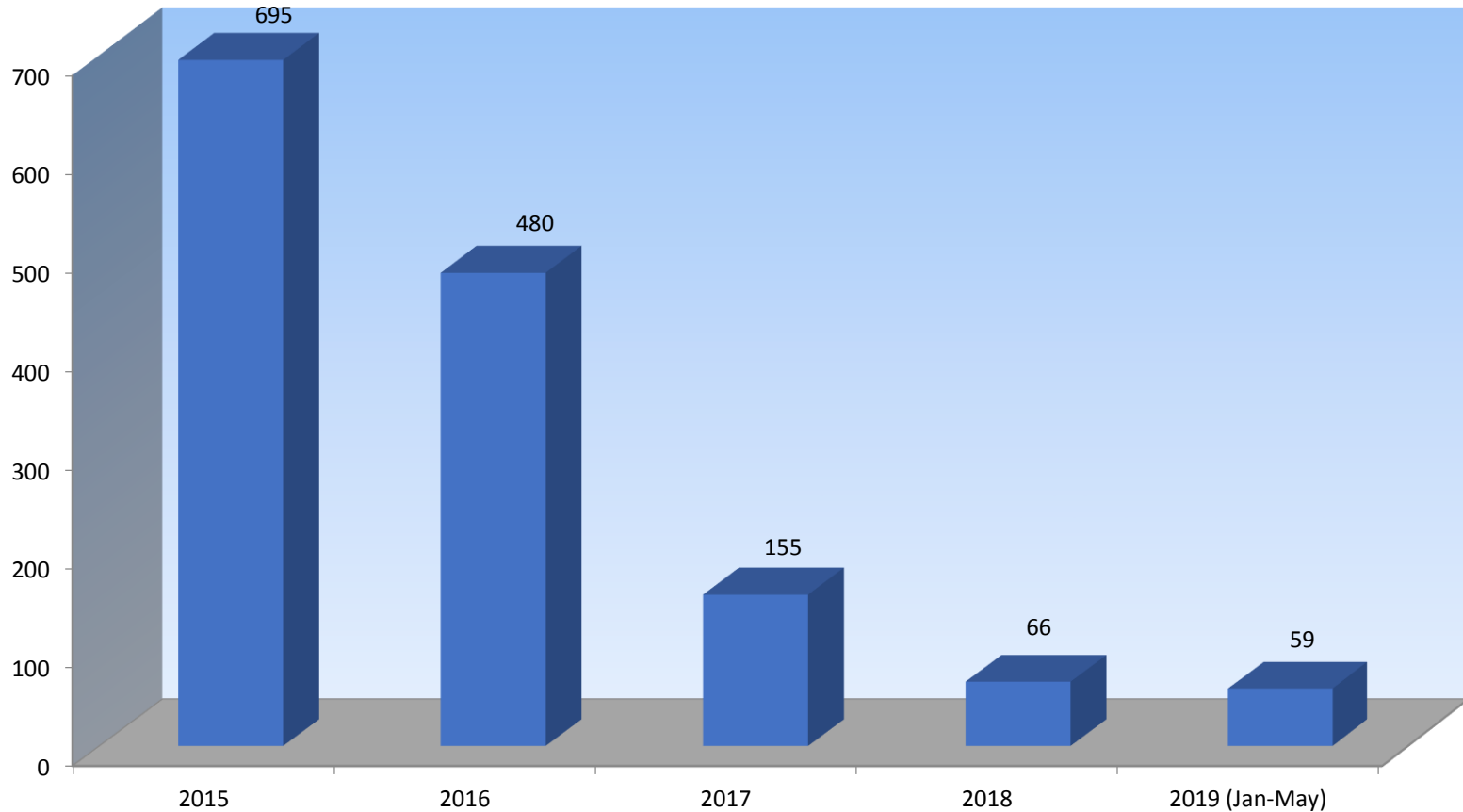
# Key Performance Indicators (KPI)

PM	KPI	Method	DERM Target
<b>Collection System SSOs Primarily Caused by FOG</b>		MDWASD Monthly Report/Meeting	Annual Reduction
<b>Collection System Blockages Primarily Caused by FOG</b>		MDWASD Monthly Report/Meeting	Annual Reduction
	Number of FOG Generators without FOG Control Device	FOG Inspections	Annual Reduction  Goal is to have None by end of 2018
	FOG Inspection Frequency	FOG Inspections	100% Annually by 2019
	FOG Education (Residential)	Education	Six (6) Events Annually, to be fully implemented by March 4, 2020
	FOG Stakeholder Outreach (commercial/industrial)	Outreach	Six (6) Events Annually

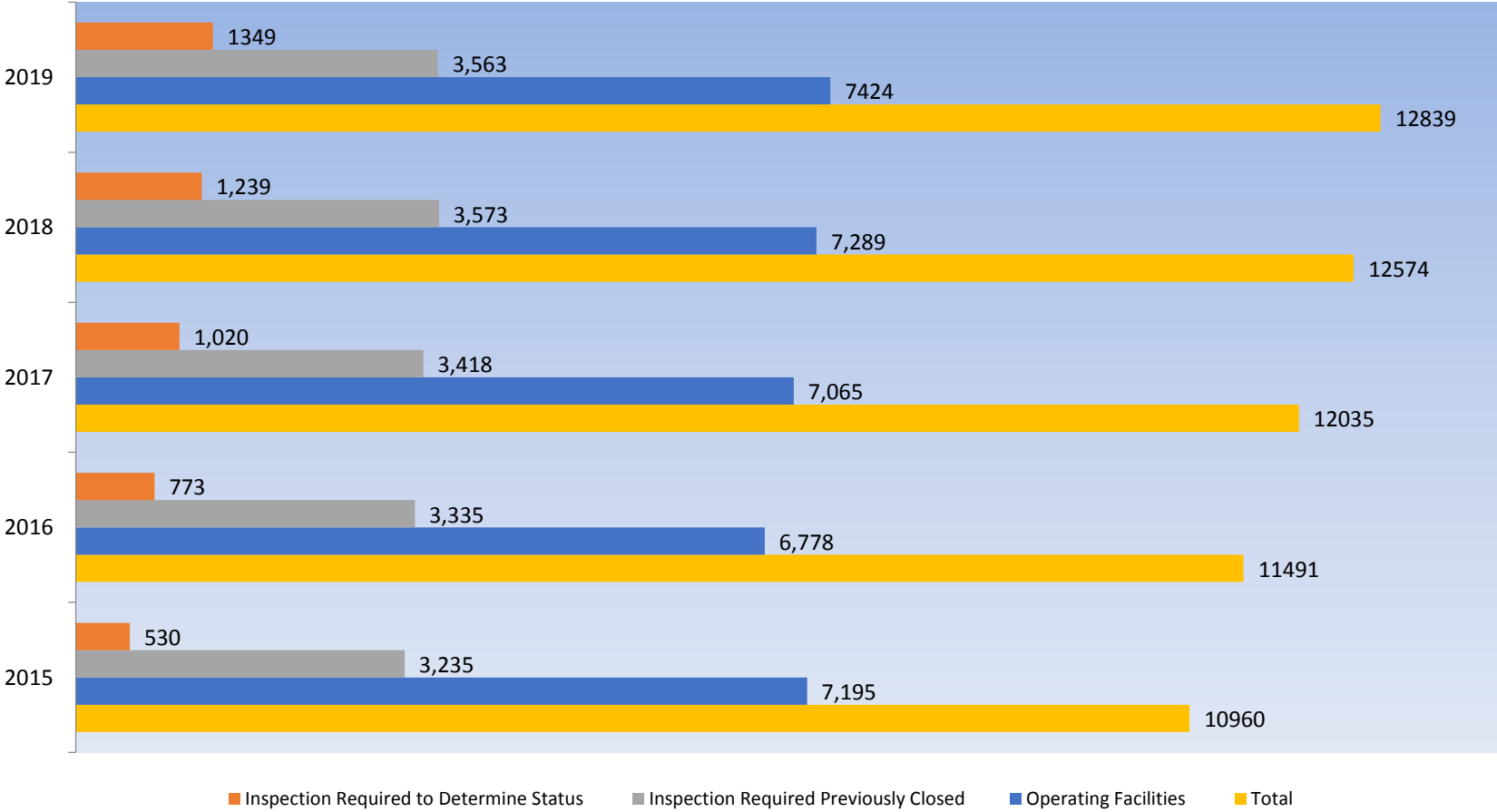
# Number of SSOs per Year



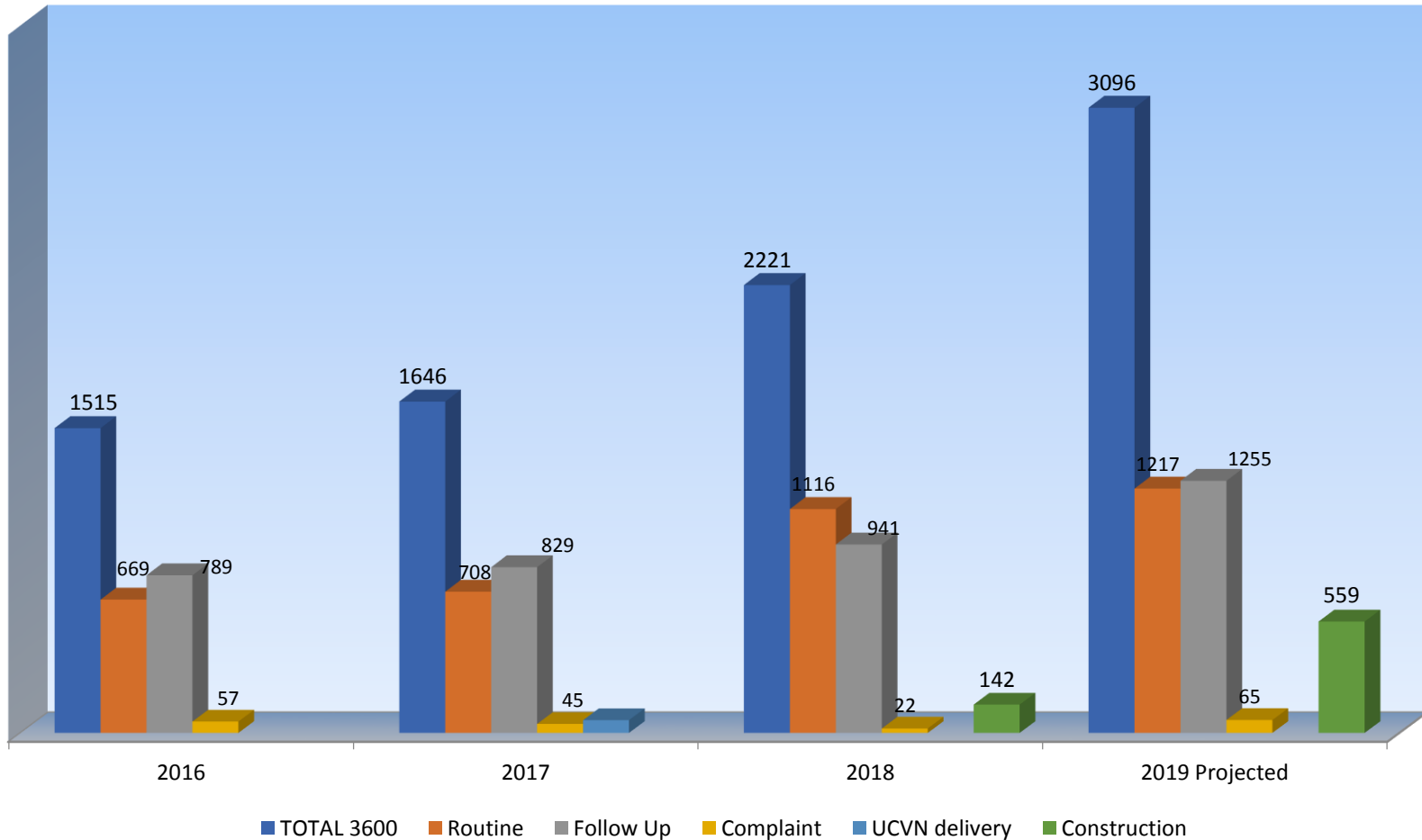
# Number of FOG Generators Without FOG Control Device (NGTs)



# Number of GDO Sites

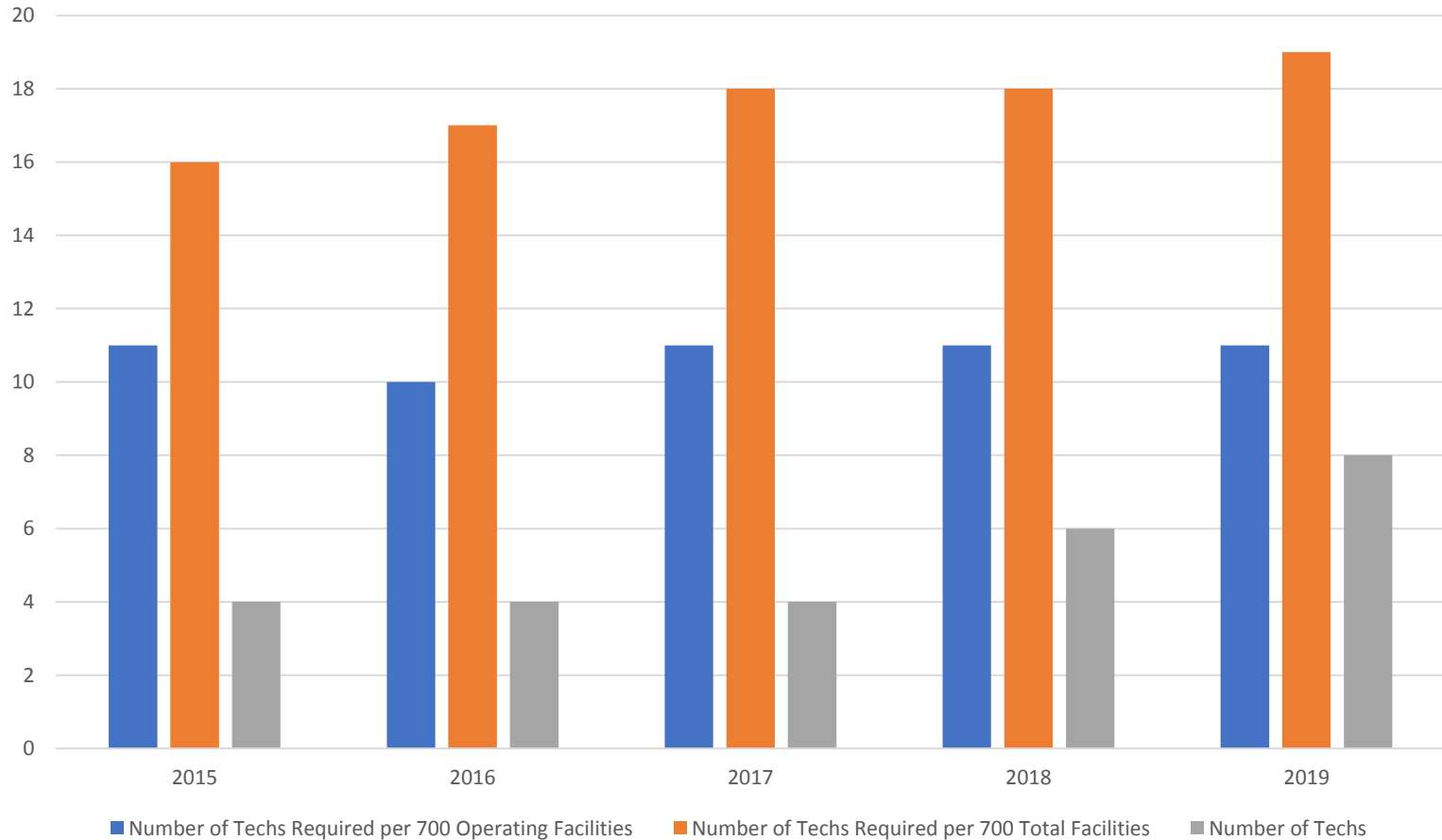


# Inspections Per Year



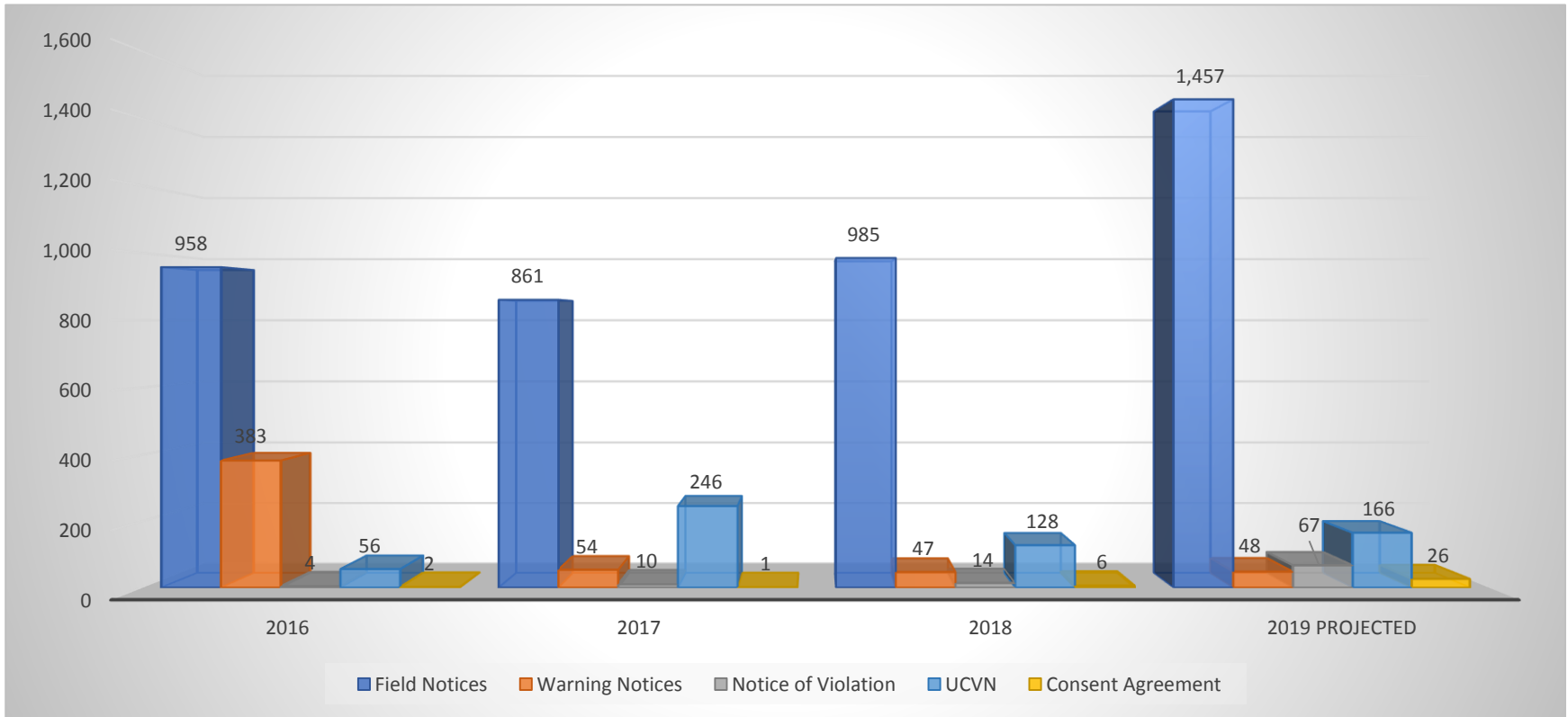
Total inspections per year is less than the number of inspections presented in the 1<sup>st</sup> Annual Report, to correct an error in the original data.

# Resources / Number of Technicians

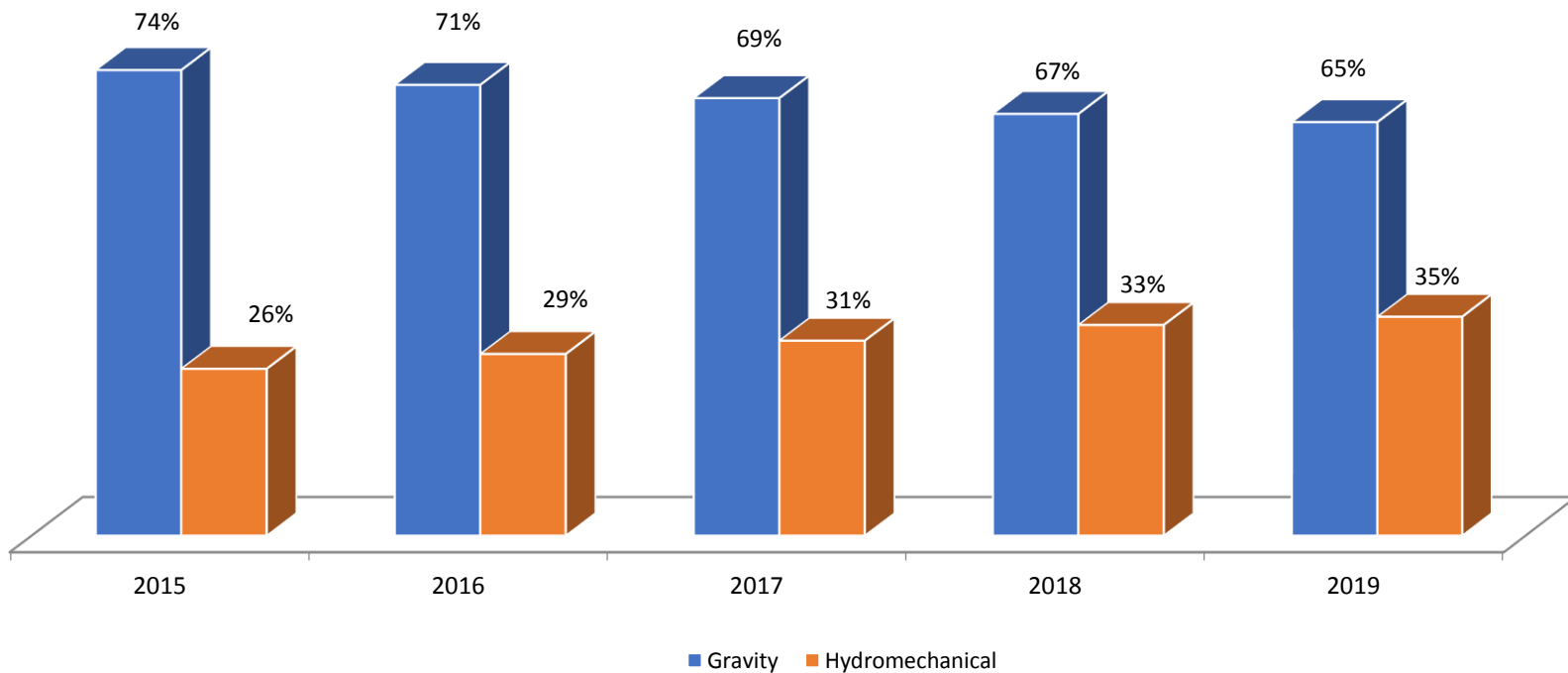




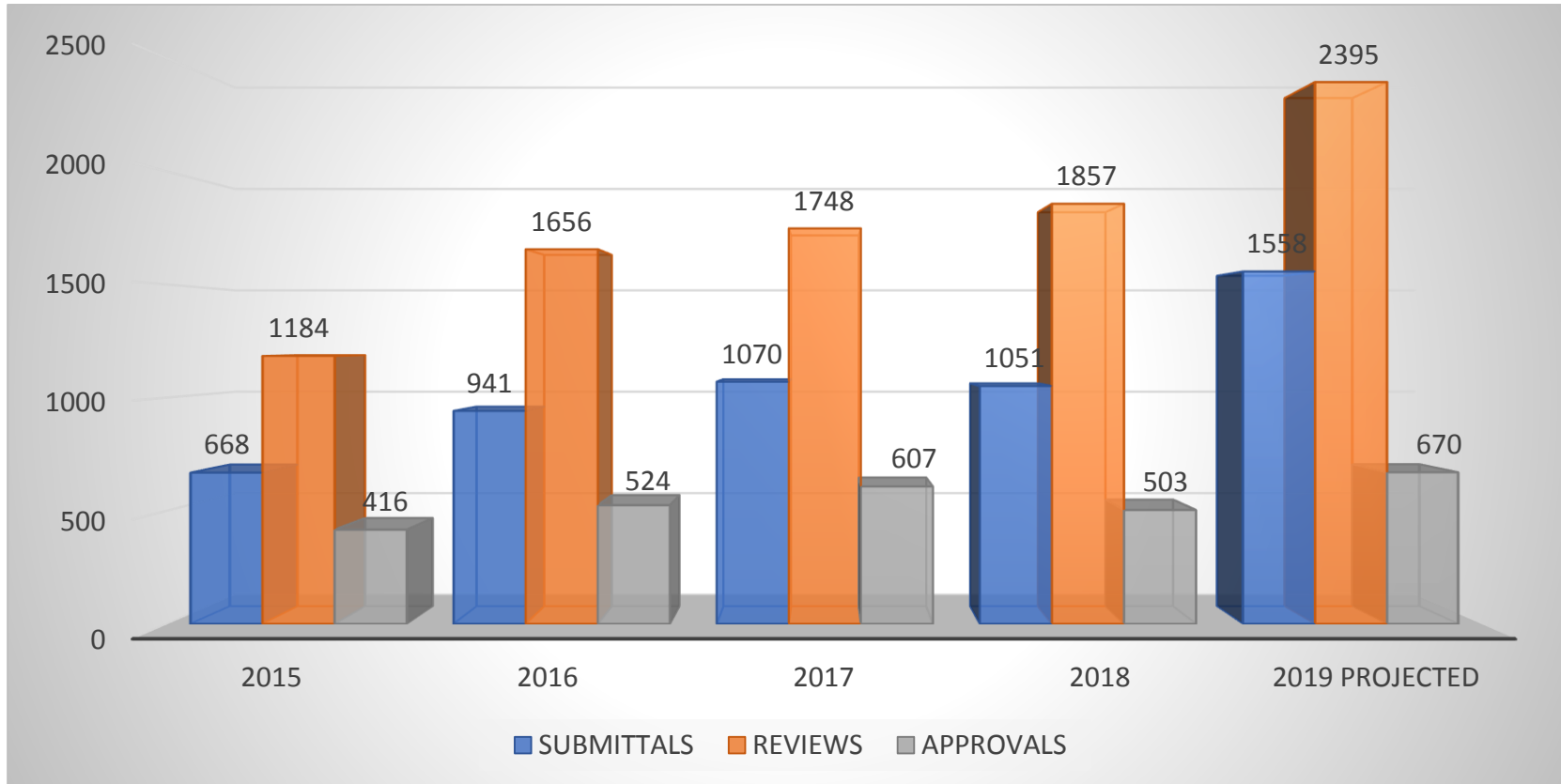
# Enforcement Actions



# Type of FOG Control Devices at FSE

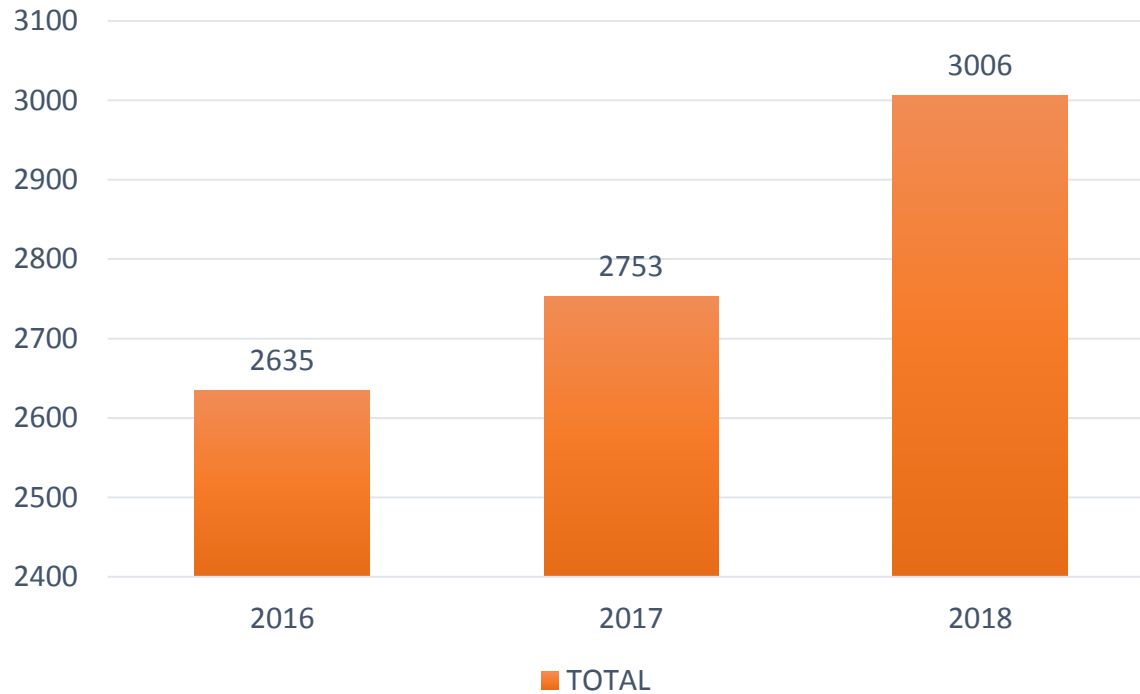


# Plan Review (OTV)

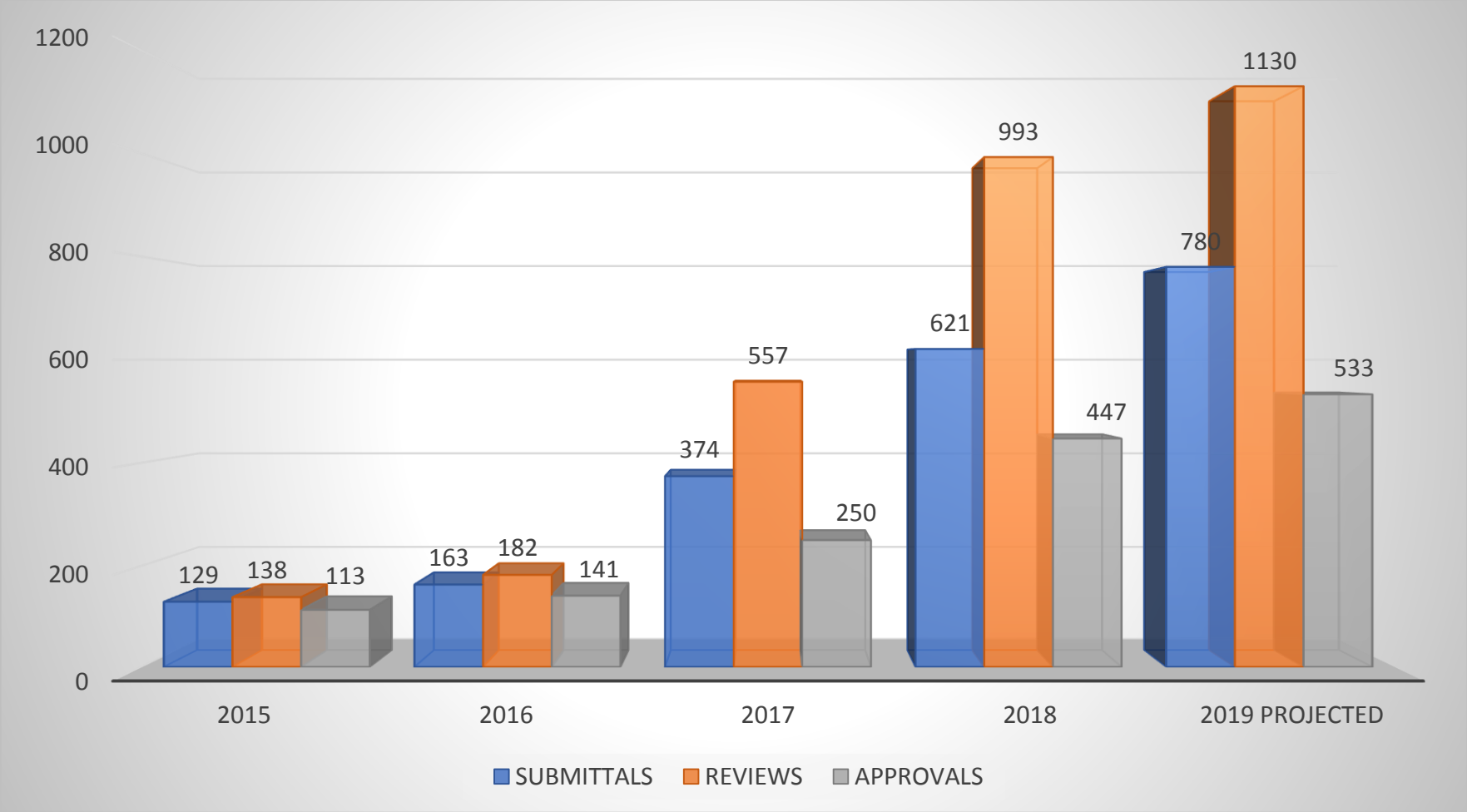


Year	2015	2016	2017	2018	2019 projected
Ratio of Reviews to Submittals	1.77	1.76	1.63	1.77	1.54

# Plan Review (PIC & OTV)



# OL/CU/BTLR Reviews (OTV)



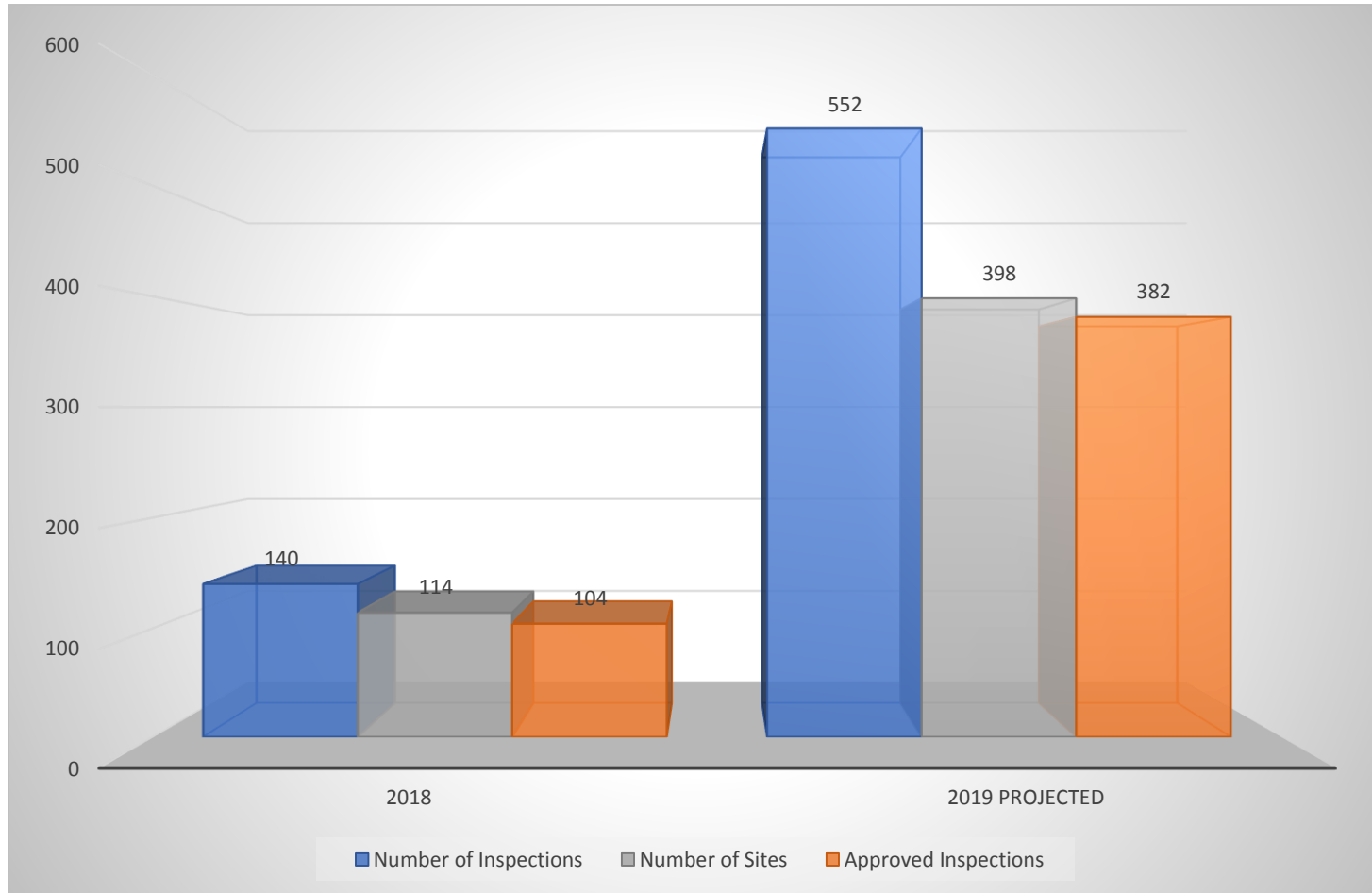
Year	2018
Ratio of Reviews to Submittals	1.45

# Outreach Events

YEAR	NUMBER
2014	15
2015	20
2016	18
2017	12
2018	19

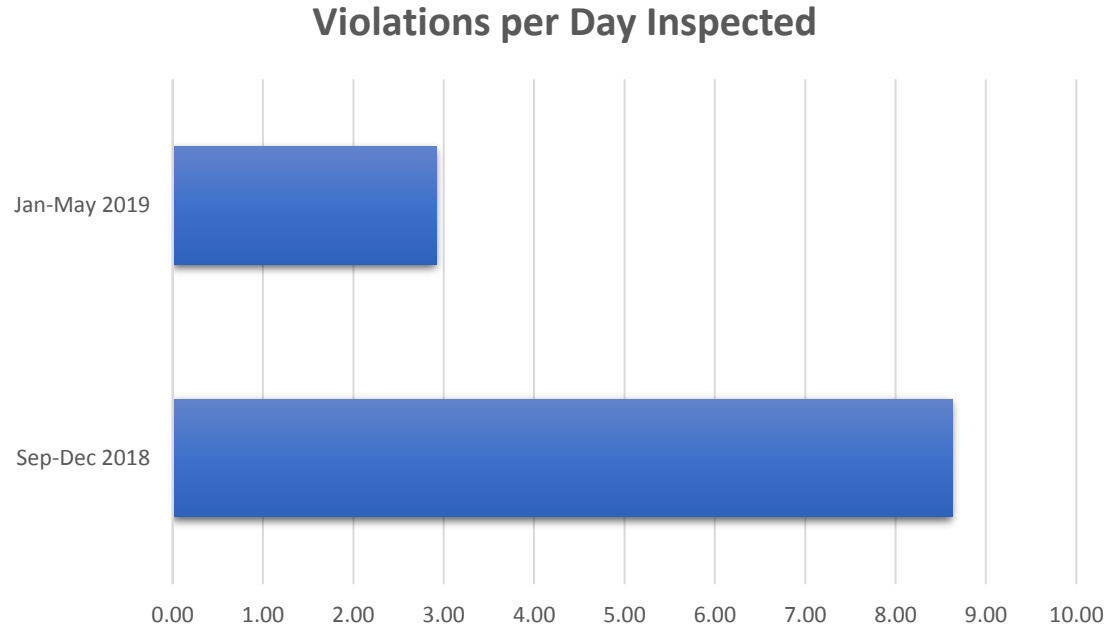
The outreach events include coordination meetings with the utilities, Quarterly FOG and utility round tables, participation in plumbing associations meetings, doing presentations in conferences where the FOG stakeholders congregate, among others.

# Municipal Construction Inspections



	2018	2019 projected
Average times each site was inspected	1.23	1.39

# Inspections at Disposal Facility SDWWTP



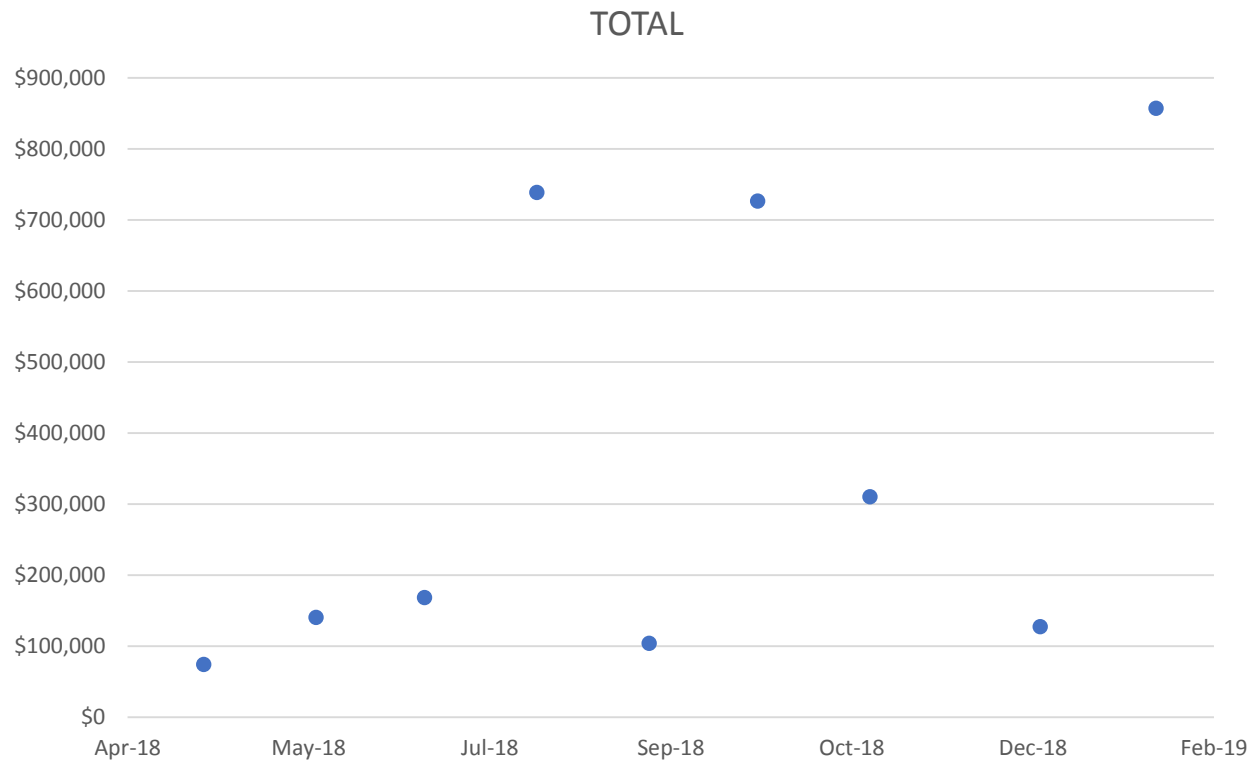
Inspections at SDWWTP began in July 2018, and consists of 1 day per week, plus 1 Saturday per month.

The total number of inspections for 2018 = **32** inspections.

Total number of inspections Jan-May 2019 = **27** inspections.



# aFOG Maintenance Cost



# COMMITTEE MEMBER'S COMMENTS

	Director's Office	RER Administration	RER W&WW	WASD	Municipal Utility (Miami Beach)
What is Your No. 1 FOG Concern?					
If you can change One thing, what would it be?					
Are PM/KPI good indicators? Y/N					
Should we add New PM/KPI? Y/N					
Other Comments?					

# NEXT MEETING

3<sup>rd</sup> Annual FOG Control Program Review

May 20, 2020

Thank you



**ATTACHMENT 4**  
**2<sup>nd</sup> FOG Control Program Review**  
**Committee Meeting Input Matrix**

## 2<sup>nd</sup> Annual FOG Control Program Review Report Committee Input Matrix

Key Topics	Director's Office	RER Administration	WASD	Municipal Utility (Miami Beach)	RER W&WWD
What is Your No. 1 FOG Concern?	<ul style="list-style-type: none"> <li>- The Department can try to work with corporations in changing their advertising campaigns to not call wipes “flushable”.</li> <li>- The Department needs to assure that facilities like Day Cares, Adult Living, and the like, are issued GDO permits as required.</li> <li>- When a Utility reports an SSO due to FOG/FROG we are inspecting all facilities in the area.</li> <li>- Even though the W&amp;WW Division is improving the FOG Control Program, we will always play catchup until more resources and funding are assigned.</li> </ul>		<ul style="list-style-type: none"> <li>- Food processing companies and industrial kitchens.</li> <li>- Disposable flushable wipes and their effect in the collection system, specifically from residential areas, daycares and adult living facilities.</li> </ul>	<ul style="list-style-type: none"> <li>- The constant feeling of playing catchup and not being able to have a preventive approach. The City is an area with high density of restaurants and would like to be in front of the FOG issues.</li> <li>- It might be effective to combine resources (MB and DERM) to address FOG issues.</li> <li>- The city wants to be proactive instead of reactive.</li> </ul>	<ul style="list-style-type: none"> <li>- Food processing facilities do not fall into the FOG program, they are mostly IWP sites and can be very problematic due to the nature of the process and the long hours of operation. Currently the Department have several of these facilities under enforcement.</li> <li>- W&amp;WW Division is collaborating with the IWP group, to assist with compliance.</li> <li>- The utilities should refer problematic facilities to RER.</li> <li>- The MDC Code has language to allow for residential enforcement, however we will need definite proof of the building source of the problem. In the meantime, education is the key factor to prevent problems caused by FROG (Fats, rags, oils and grease).</li> </ul>
If you can change One thing, what would it be?	<ul style="list-style-type: none"> <li>- The funding sources for the program can be evaluated. Particularly, the revenue from the liquid waste haulers dumping FOG.</li> <li>- Currently WASD is only using the septage rate and has not implemented the FOG rate.</li> <li>- The Department has to think outside the box in reference to resources to be able to get rid of the backlog. Possibly outsourcing to perform a one-time inspection at every facility, or at specific problem areas.</li> <li>- As the program improves accelerated maintenance cost for the utilities should reduce.</li> </ul>		<ul style="list-style-type: none"> <li>- No suggestions</li> </ul>	<ul style="list-style-type: none"> <li>- The City wants to be able to do more as a Municipality.</li> </ul>	<ul style="list-style-type: none"> <li>- The Department also has this problem of being reactive instead of proactive, which is a resource and a technology problem.</li> <li>- Regarding the funding the W&amp;WW Division believes that the GDO program is practically self-funded.</li> <li>- The Department is working on tools for effective communication between the utilities and the Department to facilitate exchange of information, i.e., GIS capabilities.</li> <li>- The expected level of service between the cities and the Department must be met.</li> <li>- Currently the W&amp;WW Division is reaching out to the local business improvements districts (BIDs) in an effort to increase FOG awareness among restaurant owners and operators.</li> </ul>

**2<sup>nd</sup> Annual FOG Control Program Review Report  
Committee Input Matrix**

<b>Key Topics</b>	<b>Director's Office</b>	<b>RER Administration</b>	<b>WASD</b>	<b>Municipal Utility (Miami Beach)</b>	<b>RER W&amp;WWD</b>
Are PM/KPI good indicators? Y/N	Yes		Yes	Yes	Yes
Should we add New PM/KPI? Y/N	- Add hauled waste as a secondary KPI, because as the Department permits and enforces pump out frequency of the FOG control devices, hauled waste should increase.		No	No	No
Other Comments?	No		No	No	No