



Primer for FOG Program  
Development; Options and  
Elements to Consider

## TABLE OF CONTENTS

<b>Section</b>	<b>Page No.</b>
<b>Executive Summary</b>	<b>vii</b>
<b>Purpose and Organization</b>	<b>1</b>
Background	1
Purpose and Organization of the FOG Control Guide	2
<b>Step 1 – Characterizing FOG Sources</b>	<b>4</b>
<b>Step 2 – Understanding the Regulatory Requirements</b>	<b>6</b>
Determine Regulatory Requirements	6
Provide Legal Framework	7
<b>Step 3 – Establishing Program Administration</b>	<b>10</b>
Identify Municipal Agency Structure	10
Identify Funding Sources	12
<b>Step 4 – Developing the FOG Control Program</b>	<b>13</b>
Select a Program Approach	13
Establish Acceptable FOG Handling and Disposal Practices	14
Construct Databases	16
Estimate a Program Budget	19
<b>Step 5 – Providing Outreach</b>	<b>21</b>
Establish Outreach Focus	21

## Table of Contents (Continued)

<b>Section</b>	<b>Page No.</b>
Conduct Stakeholder Meetings	21
Prepare Outreach Materials	21
<b>Step 6 – Inspecting Food Service Establishments</b>	<b>23</b>
Determine Inspection Approach	23
Train Inspectors	23
Conduct Inspections and Sampling	24
Follow-Up Procedures	27
Develop Hierarchy of Enforcement Responses	27

## **Appendices**

<b>Appendix A</b>	Established BMPs and Informational Brochure
<b>Appendix B</b>	On-line Resources
<b>Appendix C</b>	Model FOG Ordinance from PDI
<b>Appendix D</b>	City of Gresham FOG Policy
<b>Appendix E</b>	City of Gresham FOG Fine Process Diagram
<b>Appendix F</b>	Jurisdiction Memo, City of The Dalles

## LIST OF TABLES

<b>Table No.</b>	<b>Title</b>
1	Regulatory Requirements that Pertain to Collection System Operation and FOG Control Program Development
2	FOG Control Provisions for a Sewer Use Ordinance
3	Recommended Sequence for Creating or Adapting a Local Sewer Use Ordinance or Permit
4	Sources of Funds to Support Municipal FOG Control Programs
5	Useful Records for Identifying FSEs
6	Recommended Data to be Stored for each FSE
7	Estimating Staff Time and Costs for the Inspection Program
8	Useful Inspection Items
9	FSE Inspection Checklist
10	Organizations Working on Issues Related to FOG Control
11	Typical Inspection Activities and Time Required to Complete the Activities for the NSD FOG Control Program
12	FOG Control Program Mentors

## LIST OF FIGURES

<b>Figure No.</b>	<b>Title</b>
1	Sample Flowchart Depicting Municipal Agency Interactions with Food Service Establishments
2	Hierarchy of Possible Enforcement Responses to FOG Discharge from an FSE

## EXECUTIVE SUMMARY

---

This Primer for FOG Control was developed as a tool for municipalities, sewer districts and agencies who have determined that commercial wastewater discharge from Food Service Establishments (FSEs) requires regulation through a FOG Control Program. The guide will not be appropriate for an agency if their main source of FOG is determined to be from private residences or if the primary cause of ongoing SSOs is root growth, poor collection system maintenance, or poor condition of the collection system. The guide was developed based on the successful experiences of several municipalities and agencies in the Pacific Northwest including City of Tacoma, Clean Water Services, Clackamas County Water Environment Services, Cities of Portland, Wilsonville, and Gresham to name a few.

The primary goal of a FOG Control Program is to reduce SSOs and blockages and to protect public health and the environment by minimizing public exposure to unsanitary conditions. Sanitary sewer overflows (SSOs) are a major concern to wastewater agencies across the United States and can be attributed to many causes, including fats, oils, and grease (FOG), roots, poor conditions of the sewer lines, wet weather flows, or a combination of the sources. It is estimated that more SSOs are caused by FOG than by any other factor, prompting state and local regulating agencies to focus on FOG Control Program development as a key element of potential SSO regulations.

By controlling the discharge of FOG to the wastewater collection system, FOG buildup in sewer lines can be lessened, thereby increasing the system's operating efficiency and reducing the number of sewer line blockages and overflows. In addition, an effective FOG Control Program can minimize revenue losses associated with enforcement actions and the impacts of restricting public activities, such as beach closures.

Presented in the Primer are steps to be considered when establishing a FOG Control Program that includes installation and maintenance of interceptors, education of food service establishment operators, development of Best Management Practices (BMPs), and inspection and monitoring of the program participants. The approach involves the following tasks:

- Characterizing FOG sources
- Identifying collection system hotspots
- Determining regulatory requirements
- Identifying municipal agency structure
- Establishing an adequate legal framework
- Identifying funding sources
- Selecting a regulatory approach
- Establishing FOG handling and disposal practices
- Establishing a FSE and grease handler database

- Estimating a budget
- Providing outreach to FSEs
- Developing an inspection and monitoring approach

The guidance and recommendations provided in this document should be adapted to the unique characteristics of the individual programs under development. Each municipality will need to determine what elements are appropriate to implement based on their individual data reviews. Not all of the steps are required for each program. An agency may selectively implement steps or develop the FOG Control Program in phases.



## BACKGROUND AND PURPOSE

---

Sanitary sewer overflows (SSOs) are an important concern to wastewater agencies throughout the United States. It is estimated that the majority of SSOs are caused by Fats, Oils, and Grease (FOG). Because of this, state and local regulating agencies are focusing on FOG control as a key element of potential SSO regulations and Capacity, Management, Operations, and Maintenance (CMOM) requirements.

### **Background**

The “Primer for FOG Program Development” was created with the input and expertise of the Cal FOG Work Group in 2004, and has been modified and updated by the Western States Alliance members in 2017. The recommendations are presented as steps to be considered when developing and implementing a FOG Control Program for food service establishments (FSEs). The steps are based on successful experiences in several Pacific Northwest municipalities. The Guide can be used as a reference when developing a new FSE program or when an existing program must be updated or improved.

---

## **Purpose and Organization**

There has been an increased emphasis on preventing SSOs recently, in part because of the pending United States Environmental Protection Agency (USEPA) regulations for sanitary sewers, but also because new collection system requirements are being issued by state and local regulatory authorities through the National Pollutant Discharge System (NPDES) permits due to increased awareness of FOG as a primary cause of sanitary sewer overflows. As a result, source control and pretreatment programs have had to reevaluate or establish FOG Control Programs, which may include a FSE program component.

This document is intended to provide guidance in the development and implementation of a program to control FOG discharges from FSEs. The first step in the recommended process is to characterize the sources of FOG and determine how these sources contribute to SSOs and collection system operations. Identifying the sources of FOG and the causes of SSOs will determine the overall focus that should be selected for a particular FOG Control Program. The recommended steps for establishing a FSE FOG Control Program as follows:

**Step 1 – Characterizing FOG sources.** This section involves determining the cause of FOG blockages and the upstream sources of the FOG. Identifying the major sources of FOG will result in a more effective utilization of municipal resources when developing a FOG Control Program.

**Step 2 – Understanding the Regulatory Requirements.** This step entails researching regulatory requirements and identifying the legal framework for program development and implementation.

**Step 3 – Establishing Program Administration.** This step involves identifying municipal agency structure and potential funding sources.

**Step 4 – Developing the FOG Control Program.** This step entails developing the overall FOG Control Program for FSEs; including selection of an approach for regulating the facilities (e.g., permits, incentives, or education), establishing FOG handling and disposal practices, developing a database and establishing an operating budget.

**Step 5 – Providing Outreach.** This step involves identification of the appropriate method to educate FSE operators and the public. These activities may entail establishing the outreach focus, arranging of stakeholder meetings, providing BMP information, and circulating educational materials.

**Step 6 – Inspecting Food Service Establishments.** This step includes information on developing inspection methods to ensure compliance with regulatory requirements and to establish proper FOG handling and disposal procedures.

**Step 7 – Gathering Wisdom from Other Programs.** This step contains links and references to organizations that can provide advice and experience to staff involved in ongoing FOG Control Programs for FSEs.

## STEP 1 – CHARACTERIZING FOG SOURCES

---

It is important for each agency to fully understand the sources of their FOG problems prior to developing a control program. The agency must determine the location of collection system “hot spots” (areas within the collection system that require frequent maintenance), how these hot spots are related to FOG discharges, and where the FOG originates. Since FOG blockages are a “middle-of-the-pipe” problem, it is necessary to evaluate ongoing collection system maintenance, as well as all potential sources of blockages, to provide a complete and accurate picture of what is contributing to SSOs. This information allows an agency to determine where its resources should be focused to effectively control FOG discharges and reduce overflows and operational problems in a cost effective manner.

Historical records of collection system maintenance activities should be reviewed to ascertain any useful information on the causes of SSOs and locations of any FOG-related hotspots.

A system for reviewing these records is outlined below

- Identify any problem sites within the collection system based on SSOs, extent of cleaning frequency, odor reports, and any other type of citizen complaints.
- Review collection system operator’s notes, ***especially on the type of materials being removed during cleaning***. (If this type of information is not being recorded, institute a standardized policy for data collection based on the following two action items).
- Introduce standardized forms (cleaning and repair) for recording specific information during maintenance work.
- Distribute log books to keep with the maintenance/inspection vehicles for recording information during drive-by inspections.
- Compile the information and categorize the hot spots by the cause of the operational problems (e.g., roots, FOG, structural issues).
- Produce collection system maps that show the spatial relationships between the hot spots and particular areas of the municipality (e.g., high density or single family residential areas, business districts, and restaurant districts). Many agencies use Geographic Information Systems (GIS) for mapping and data management that can be frequently updated and contain land use information.
- Rate the severity of each hotspot on the map and use this information to determine correlations between upstream use and FOG-related hotspots.

- Characterize the sources of FOG at each FOG-related hotspot. Depending on the source of the FOG, program resources should be allocated accordingly. For example, if FOG is accumulating downstream of a residential area, resources should be directed towards public education. However, if FOG problems are occurring downstream of restaurants and business districts, program resources should be allocated towards educating FSEs.

## STEP 2 – UNDERSTANDING THE REGULATORY REQUIREMENTS

---

The strategy and approach of a FOG Control Program should be based on the jurisdiction's recognized and agreed-upon goals, developed by program personnel with input from other municipal or regulatory agencies. For example, wastewater treatment agencies want to see improved performance at the treatment plant, collection system operators want to minimize SSOs and sewer cleanings, stormwater agencies want to keep FOG out of the storm drains, and the regulatory authorities want to prevent public health hazards and contamination of local waterways. At the onset of program development, it is imperative that these goals and their timelines are recognized and incorporated into the FOG Control Program. It is wise to include the state approval authority in this process, especially if the FOG Control Program is specified as part of a permit issued to the POTW and/or the collection system.

### **Determine Regulatory Requirements**

The U.S. EPA has drafted regulations for addressing collection system operations and maintenance and SSO prevention, but formal adoption of the regulations has not yet occurred (40 CFR, Parts 122 and 123, proposed rule). If the municipality is not under a permit order from the state approval authority, determine the status of the proposed Federal regulations and consult the local authority before developing a FOG Control Program. The POTW's NPDES permit should be reviewed for any provisions related to its collection system and the local health department should be contacted to determine if they have any special operating requirements for the collection systems or food service establishments. Some of the regulations that can potentially affect development of a FOG Control Program are listed in **Table 1**. Additional research may be required to determine the applicability of these regulations to the local municipal agency. However, completion of this research will ensure that all regulatory requirements are addressed prior to development and implementation of a FOG Control Program for FSEs.

**Table 1. Regulatory Requirements that Pertain to Collection System Operation and FOG Control Program Development**

<b>Regulation</b>	<b>Enforcement Agency</b>	<b>Document</b>
Collection system maintenance and operational requirements	U.S. EPA	Pending legislation: Capacity, Management, Operations, and Maintenance Requirements (CMOM) <i>CFR 40, Parts 122 &amp; 123</i>
General collection system permit	U.S. EPA and the state Approval Authority	Under development for selected regions
Clean Water Act, Basin Plan	U.S. EPA and the state Approval Authority	NPDES permits issued to the local POTW
Local health ordinance	Local health department	Municipal or County Health Code
Local sewer ordinance	Local sewerage agency or POTW	Municipal Code

**Provide Legal Framework**

An appropriate legal framework will be necessary to implement the FOG Control Program. Establishing this framework may involve adopting a local sewer use ordinance, amendment of an existing ordinance, or directly permitting the FSEs. When writing or adapting a sewer use ordinance, keep in mind that the document should include clearly defined legal requirements and should be easily enforced. Suggested provisions for a local sewer use ordinance are listed in **Table 2**. These provisions are based on knowledge derived from existing FOG Control Programs and may also be considered when developing a permit based FOG Control Program.

**Table 2. FOG Control Provisions for a Sewer Use Ordinance**

<b>Level of Authority</b>	<b>Possible Provision</b>	<b>Reason for Inclusion</b>
Water Quality	Prohibit discharges exceeding a maximum FOG concentration	Sets an identifiable standard for the FSEs to achieve. (However, there is currently no technical basis for a FOG limit intended to protect a collection system.)
	Kitchen BMPs (mandatory or optional)	Mechanism to control FOG discharges to the sanitary sewer in addition to installation of a grease interceptor.
Equipment Requirements	FSEs must install, operate, and maintain grease control equipment.	Ensures installation and maintenance of FOG control device at food service establishments.
	Approval of the <u>type</u> of grease control equipment to be installed.	Allows the agency to ensure that inappropriate equipment is not installed at an individual site.
	Approval of <u>size and location</u> of grease control equipment.	Ensures that the equipment is sized properly and located where cleaning and inspections can easily take place.
Facility Access/ Inspections	“Right-to-Enter” the facility must be guaranteed for municipal agency inspectors.	Ensures that the regulating agency can inspect the facility.
	Pre-determined inspection frequency (e.g., once a month) and notification procedures.	Informs the FSE operators of the planned inspection schedule.
Control Mechanism	Mandatory participation for the FSEs in a permit program or in a pollution prevention certification program.	Ensures that all FSEs are aware of the program’s requirements and are held accountable for compliance.
Enforcement	Establish fines and fees for non-compliance with ordinance provisions.	Notifies the FSEs that the FOG Control Program is important and compulsory.
Equipment Maintenance Program	Maintenance requirements established for FOG control equipment (e.g., monthly inspections and cleaning).	Ensures proper functioning of the FOG control equipment.
	Maintain records of all visual inspections and cleanouts, keep records for a minimum amount of time, and make records available to inspectors upon request.	Allows regulating agency access to all maintenance records to verify proper operation.
	Prohibit discharge and use of chemical or biological agents that could be used to emulsify FOG.	Prevents discharge of harmful chemicals to the sanitary sewer and prevents solidification of FOG farther along in the sewer system.
Waste Grease Disposal Practices	Require FSEs to contract with licensed and permitted grease handlers.	Ensures that waste grease is removed by reputable and traceable handlers.
	Participate in voucher programs to track grease disposal methods.	Notifies the FSEs and handlers that stated grease disposal methods and locations will be verified.



If the provisions of the ordinance are perceived as too rigid or too difficult to implement, the ordinance may not be implemented successfully. To minimize this problem, the stakeholders should be involved in ordinance development. Stakeholders may include FSE operators, health department inspectors, city council members, stormwater inspectors, building inspectors, business license division personnel, and collection system/treatment plant operators. The stakeholders may be contacted individually or convened as a group for a “working session” to settle on the details. To minimize the number of attendees, the state Restaurant Association or some other local FSE association, could provide representation and feedback. The Oregon Restaurant and Lodging Association (ORLA) has successfully undertaken this responsibility during similar work sessions for existing FOG Control Programs. The sequence outlined in **Table 3** is recommended during the development of a local sewer use ordinance or permit. Examples of sewer use ordinances that have been created or adapted for managing FOG discharges are presented in **Appendix A**.

**Table 3. Recommended Sequence for Creating or Adapting a Local Sewer Use Ordinance or Permit**

<b>Sequence</b>	<b>Action</b>
1	Determine whether the existing sewer use ordinance contains provisions for FOG control.
2	Review ordinances and permits from other municipalities.
3	If necessary, create a draft ordinance or amendment and internally identify the negotiable and non-negotiable provisions.
4	Ask for input from the other municipal agencies that may be affected (e.g., health department, stormwater program).
5	Ask for input from the local restaurant association (i.e., ORLA) or other business associations.
6	Obtain a legal review.
7	Conduct a town hall meeting or workshop and invite applicable stakeholders.
8	Issue a public draft for comment (not mandatory for a permit).
9	Adopt the final ordinance or permit.

## STEP 3 – ESTABLISHING PROGRAM ADMINISTRATION

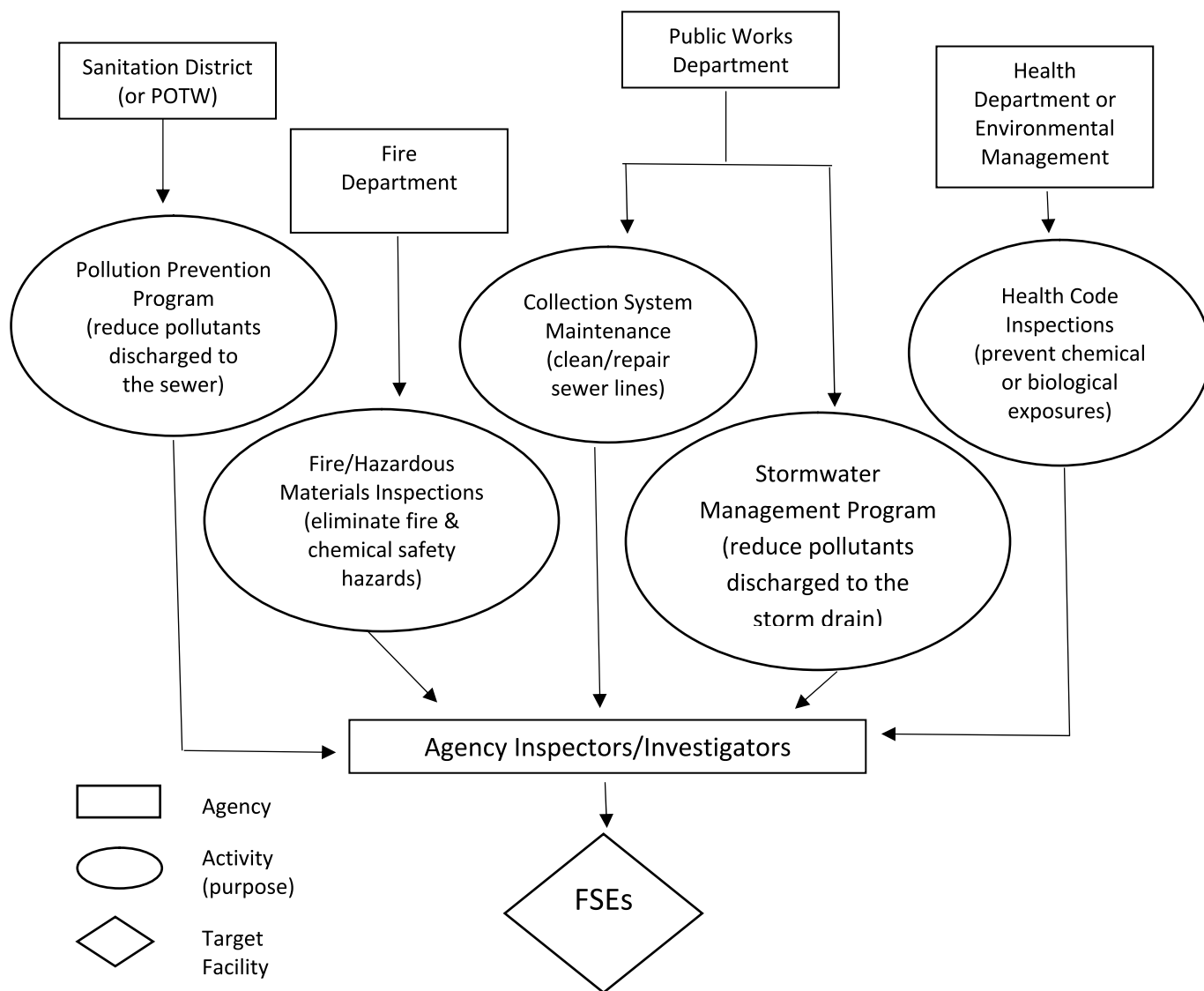
---

Administration of a FOG Control Program may be established through a Source Control or Pollution Prevention Program, a Collection System Maintenance Program, or a Health Department Inspection Program. No matter which agency is used to administer the FOG program, there must be communication between departments and sharing of detailed information. Guidelines are presented in the following paragraphs regarding identifying and facilitating inter-departmental interactions. This section also includes a review of the types of funding sources available for a FOG Control Program.

### **Identify Municipal Agency Structure**

Getting to know how the applicable municipal agencies are organized is essential to determining how the FOG Control Program will operate most effectively. Municipal agency operations should be identified and reviewed prior to establishing a line of communication with the appropriate agency officials. As part of that communication, the importance of the FSE control program should be emphasized. For example, damage claims and/or enforcement penalties may be avoided if proper control measures are implemented and enforced.

It may be useful to create a flowchart or an organization chart showing the municipal departments and the officials that interact with the RFSEs (e.g., fire, health, stormwater, etc.). A sample flowchart has been included as **Figure 1** to show the appropriate level of detail. Each member of the FOG program staff should be familiar with the levels of authority that interface with the FOG Control Program and understand each agency's particular responsibilities. To reduce confusion among the FSE operators; it is best to have one municipal agency launch the FOG Control Program, oversee implementation of the program, evaluate its effectiveness, and coordinate improvements to the program over time.



**Figure 1. Sample Flowchart Depicting Municipal Agency Interactions with Food Service Establishments**

There are many advantages to working effectively with the different municipal agencies. Plumbing, building and health departments are a source of records to determine operations inside an FSE. Street and traffic personnel can supply information on problem sewer lines when provided with maps of the collection system. Establishing and maintaining good communication with all of the appropriate municipal departments will result in quick reports on sewer problems and provide interim monitoring between facility inspections. Tracking the FOG Control Program efforts and reporting the data to all interested agencies facilitates information sharing and minimizes repetitive contacts with the FSEs.

## Identify Funding Sources

Revenue collection, grants, and other funding methods have been used to support FOG Control Programs. Some of the available funding sources are listed in **Table 4**, along with information on where and how these funds are utilized.

**Table 4. Sources of Funds to Support Municipal FOG Control Programs**

<b>Funding Mechanism</b>	<b>Use of Funds</b>	<b>Source of Income</b>	<b>Sample Municipality</b>
Cost Recovery	SSO cleanup expenses	Dischargers assessed cost for removing FOG blockage	City/County of San Francisco, City of Tacoma, Clean Water Services
Permit Fees	FSE Permit Program Administration	FSEs pay an annual permit fee to obtain a discharge permit	
Sewer Use Fees	FOG Control Program Administration	Sewer use fees paid by all dischargers are distributed to specific programs through a general fund	Napa County Sanitation District, Clean Water Services, Clackamas County WES, City of Portland
Enforcement Actions (fines and penalties)	FOG Control Program Administration	Fines levied against dischargers are used for program implementation	
Grants	FOG Control Program Administration	Proposition 40, administered by the State Water Resources Control Board and the U.S. EPA	City of Cupertino
Pollution Prevention Fee	Administration of Pollution Prevention Program	Monthly fee paid by all commercial dischargers, with a portion allocated to the FOG Control Program	East Bay Municipal Utility District
Contributing Member Agencies	Program Development	Contribution proportional to number of FSEs in the agency's wastewater service area	East Bay Municipal Utility District

## STEP 4 – DEVELOPING THE FOG CONTROL PROGRAM

---

Developing the FOG Control Program will involve selecting a regulatory approach (e.g., educational or enforcement-based), establishing FOG handling and disposal practices, developing SE and hauler databases, and estimating program costs.

### **Select a Program Approach**

There are several options available for regulating FSEs including education, program administration through an ordinance, permitting, providing incentives, and enforcement. As discussed in **Step 2**, the specific regulatory requirements must be reviewed as a method to determine the best approach for working within established guidelines. The five broadly classified approaches are described below and should be considered when developing a FOG Control Program.

#### ***Educational Approach***

In an educational approach, the impetus is to educate the facility operators on the need to prevent FOG discharges to the sanitary sewer. The educational approach should always be employed during the first contact with FSEs. Distributing educational tools (posters, brochures, fact sheets, grease cans, grease scrapers, etc.), holding workshops, and conducting periodic facility assessments are all good starting points for a FOG Control Program.

#### ***Ordinance Approach***

A local sewer use ordinance may give an agency the authority it needs to develop and implement a FOG Control Program. If legal authority does not exist for FOG control, adaptation of an existing ordinance or creation of a new ordinance may become necessary. **Step 2** includes a discussion of the applicable FOG control provisions and **Appendix A** contains examples of existing sewer and FOG control ordinances.

#### ***Permitting Approach***

In a permit-based system, FOG handling permits may be issued to all or some FSEs. The permittees may or may not be assessed a fee for obtaining the permit, depending on available sources of funding for the municipality. Permit requirements may include installation of specific FOG removal equipment, required maintenance frequency, or the implementation of FOG handling BMPs. Permits may also be issued to grease haulers and/or grease recyclers.

Permits are a common regulatory control method because they offer a clear channel of communication to the FSE about their requirements for compliance, as well as a concise, uniform, and legal framework for operation of the FOG Control Program. However, permits do have drawbacks and may not be the best choice for every FOG Control Program or every FSE within that program. Some control programs have thousands of FSEs within their jurisdiction. If a large amount of paperwork is associated with issuing a permit, keeping current permits on numerous FSEs could overwhelm a program, especially considering the number of restaurants that may change ownership or go out of business each year. For this reason, a FOG Control Program may opt to reserve permits for its largest FSE or use the permit as a compliance tool for those FSEs that continue to cause blockages or have repeated violations.

### ***Incentive-Based Approach***

In an incentive-based program, certifications and/or business awards would be provided to the FSEs that implement proper FOG control measures and follow all program requirements. The program awards and recognition can be a marketing tool for some facilities and thus provide an incentive for compliance. Incentives can easily be tied into one of the approaches listed above, such as education and permitting.

### ***Enforcement Approach***

In an enforcement approach, FSEs are fined for FOG discharges or assessed clean-up fees (based on SSO evidence or CCTV records). This approach is typically used in conjunction with education, ordinance, permitting, or an incentive-based program. Enforcement actions are implemented when an FSE has refused or failed to participate in the educational programs or has violated compliance requirements. It is best to develop an enforcement response plan defining an escalating response strategy to violations.

## **Establish Acceptable FOG Handling and Disposal Practices**

Acceptable FOG handling and disposal practices must be developed and written as part of a FOG Control Program. The practices may be part of a sewer use ordinance, permit, BMPs, or informational aspect of the program. Part of this development process should include input by different stakeholders, as discussed in **Step 5**. General categories of FOG control practices are described below.

**Required Types and Sizing of Grease Removal Equipment.** This category of FOG handling and disposal practices is more technical in nature and includes acceptable types/brands of FOG control equipment, allowable types of connections, suitable uses of the equipment, appropriate sizing criteria, and installation of sampling boxes. Equipment sizing is based on either the amount of grease to be collected or an estimated flowrate through the equipment. Many municipal ordinances require use of Appendix H of the Uniform Plumbing Code to size grease interceptors. However, these specifications are under review because they tend to result in oversized interceptors. An oversized interceptor is difficult to clean and yields a long detention time. A long detention time can result in the production of hydrogen sulfide

which is odor causing, corrosive, and damaging to grease removal equipment as well as downstream sewer piping. Requiring manhole access to interceptors and installation of a sampling box can be very useful for interceptor inspection and sampling (see discussion in **Appendix B**).

**Operation and Maintenance of Grease Removal Equipment.** This category of FOG handling and disposal practices includes how to properly operate and maintain grease traps and grease interceptors. In the past, operational requirements may have included a prohibition on dishwasher or garbage disposal connections to grease control devices. Many of the newer devices have been designed to handle the temperature and loading of these fixtures. Maintenance requirements may include specific cleaning frequencies, effective cleaning methods, and retaining pump-out records for a specified amount of time.

**Best Management Practices.** This category of FOG handling and control practices includes activities to keep FOG from being discharged to the sanitary sewer. The specified activities may include dry clean-up methods for FOG spills, scraping plates prior to washing, using baskets in sink drains, prohibiting addition of chemical or biological grease control agents, posting of instructional signs, and general equipment recommendations. BMPs may be an optional or mandatory part of a FOG Control Program. An example of restaurant BMPs is presented in **Appendix A**.

**Grease Storage for Recycling.** This category of FOG handling and disposal practices relates to storing yellow grease for pickup by a recycling (or rendering) company. Proper storage practices include use of a specific type of container, tight-fitting lids, and establishment of secondary containment in case of spills. Contact information for licensed, reputable grease recycling companies in the area should be prepared for distribution to the FSEs.

**Allowable FOG Disposal Methods and Locations.** This category of FOG handling and disposal practices includes providing the FSEs with a list of acceptable methods for FOG disposal and identification of the local disposal sites for FOG waste. A list of licensed grease haulers should be established and distributed to FSEs. Instructions for the FSE employees on how to deal with grease haulers and how to verify that the hauler is using appropriate disposal methods may also be included. It may be beneficial to conduct workshops with local haulers to educate and train them on the types of pumping and disposal methods that are acceptable in the municipality.

Each municipality has a different approach for FOG disposal. While all POTWs receive some grease through their collection system, many POTWs do not accept waste grease from waste hauling services. Of the POTWs that take grease from waste haulers, some may only accept FOG waste from facilities located in their service area. Some POTWs accept grease from any location. Others have purchased their own pumping equipment and perform some interceptor cleaning for FSEs in their sewer service area (such as the City of Oxnard). The municipal FOG Control Program must be aware of the methods and locations for FOG disposal in its locale in order to optimize control over the waste stream.

Decanting of water from grease hauler’s trucks is another issue that most FOG Control Programs will have to address. Decanting is the practice of allowing the water portion of what has been removed from the interceptor to be returned back into the pretreatment device. This water portion contains solids, may have a low pH, and may have been contaminated from the hauler’s previous load. For this reason, decanting by waste haulers should not be allowed unless adequate pretreatment is provided for the returned water and approval from the local control authority has been granted.

## Construct Databases

Maintaining accurate records of all activities related to controlling FOG discharges from FSEs is essential to conducting a successful program. In order to facilitate the recordkeeping process and to provide easy access to the compiled information, databases must be created. The three essential types of databases (FSEs, grease handlers, and collection system O&M) are detailed in the following sections.

**Construct an FSE Database.** During development of a FOG Control Program, FSEs in the municipality should be identified and compiled into a database. A list of possible FOG dischargers will be necessary to focus outreach efforts, issue permits, and conduct inspections.

A number of existing records may be utilized to identify the local FSEs. A list of these records is presented in **Table 5**. However, each agency keeps different types of records and there may be additional databases available. The type of data to be collected and stored for each FSE is listed in **Table 6**. When reviewing the existing records, keep in mind that any information provided about the FSEs (especially regarding their operational attributes) may become valuable and should be documented for later use.

**Table 5. Useful Records for Identifying FSEs**

Organization to Contact	Available Records
Municipal Business License Department	List of local business licenses
City/County Storm Water Program	List of NOIs, inspection reports
Local Health Department	Business list/inspection reports
Yellow Pages	Advertisements for local restaurants, listings for cooking schools
Chamber of Commerce	Existing and new business lists
Pretreatment Program	List of permittees
Local Sanitation District or Collection System Agency	Field inspection reports
Building, Utility, and Fire Departments	Field inspection reports
Pretreatment Program	List of permittees

**Table 6. Recommended Data to be Stored for each FSE**

Data to be Stored	Data to be Stored (continued)
-------------------	-------------------------------



Name of FSE, address, phone number	Interceptor Cleaning Frequency
Property owner, address, phone number	Health Department License Number
Manager's name	Number and type of violations
Contact person's name	Monthly average water use
Number of employees	Monthly wastewater discharge volume (if available)
Type of food served	Link to downstream sewer blockage or SSO
Hours of operation	History of FOG discharges (if reported)
Number of meals served per day	Current FOG disposal method
Peak hours of operation	Name of contracted grease hauler
Seating capacity	Have Vapor hoods? Yes/No
Major equipment checklist: garbage disposal, ice machine, dishwasher	Vapor hood cleaning service (name, contact information)
Grease Removal Equipment: Yes/No, type, capacity: <u>gallons</u>	On-site or off-site vapor hood cleaning?
Waste hauling records or invoices	Education materials provided to the FSE (training, posters, brochures)

The database format should be selected using the expected size, value, and use of the database. If the FOG program database is tracking activities that may be of interest to other municipal agencies, the database format should be compatible with the other operating systems.

To ensure that the database is always up-to-date with new food service establishments or changes in operations at existing facilities, the FOG Control Program should be in frequent contact with other pertinent agencies. This may best be accomplished by putting the FOG program on circulation lists or possibly an automatic email notification system to inform the program personnel when new business licenses are issued, building permits/expansion plans are approved, and health department or storm water program violations noted. All of this information should be added continually to the FSE database in order to anticipate any potential FOG discharge problems.

**Construct a Grease Handler Database.** There may be two types of grease handlers encountered in a FOG Control Program. “Grease haulers” clean out grease interceptors at food service establishments and dispose of the collected wastes. They may also be referred to as “brown” grease haulers. The brown grease may be disposed of at a local POTW who accepts grease wastes or at a grease recycling company. Identifying these companies may be accomplished by looking in the Yellow Pages under “grease,” compiling a list from contacts with FSEs, checking disposal records at the local POTW that accepts grease waste, and visiting the Preferred Pumper website at [www.preferredpumper.org](http://www.preferredpumper.org) .

“Grease recyclers (or renderers)” typically collect FOG waste from an FSE’s tallow or yellow grease bin and recycle the waste into some usable products; such as animal feed supplements, soaps, oils, cosmetics, and biodiesel fuels. Yellow grease is not normally found in the sanitary sewer system as it has a relatively high value and is stored on-site in special containers for collection by the recyclers. Grease recyclers may be found in the Yellow Pages under “rendering companies” or through contact with FSEs.

Information obtained about grease haulers and recyclers doing business in the local area should be compiled into a database. The database format can be the same as used for the FSEs; however the type of information stored will be different. For example, it may be useful to record information on the vehicles used by grease haulers (VIN, type of equipment, and condition of vehicles), driver names, pumping and delivery schedules, contracted FSEs, and any ongoing disputes or legal actions.

Some type of grease handler identification and tracking should be undertaken by the Fog Control Program.

**Develop Collection System O&M Database.** The local Public Works Department (or whichever municipal department operates the collection system) should be contacted to obtain historical data related to FOG blockages and SSOs. (The information acquired during **Step 1** can be used as a starting point for this database). The locations of the sewer “hot spots” can be overlaid with restaurant locations for GIS mapping and aid in identifying problem food service establishments. Posting a large wall map with a

plastic overlay can be an easy method to locate and target these hot spots. Having this map readily available is also an excellent way to communicate with agency directors and politicians. These are the people that provide essential support to a FOG Control Program. An ongoing notification system between the collection system staff and the administrators of the FOG program should be implemented to coordinate investigations of grease-related SSOs and blockages.

## **Estimate a Program Budget**

Based on the selected regulatory approach and the associated program activities, an overall budget for the program can be estimated. The budget estimate should include staff time, materials and equipment costs, inspection costs, analytical costs, and other services that will be provided.

### ***Outreach Program Costs***

To estimate a budget for the outreach program, first determine the materials that will be produced and then determine to whom and how the materials will be distributed. (**Step 5** includes information on selecting an outreach approach and developing related materials.) The initial cost for outreach materials will include design and preparation, but in subsequent years, the outreach costs may only involve production and updating. Once these selections are made, the total costs of the outreach program can be determined by adding up the estimated staff time to conduct workshops and distribute the materials, design/production costs of the materials themselves, and any other costs associated with distributing the materials. It may be helpful to contact other FOG Control Programs and discuss their costs per food service facility per year in order to verify the predicted budget.

### ***Inspection Program Costs***

The costs of implementing an inspection program to control FOG discharges will involve significant staff time. The required time may include training, facility inspections, sample collection, review of grease control equipment specifications, FOG discharge investigations, and BMP implementation review. The items to be quantified in order to predict program costs are listed in **Table 7**. However, additional staff costs may be incurred for investigating sewer blockages and reviewing equipment installation plans.

**Table 7. Estimating Staff Time and Costs for the Inspection Program**

<b>Items of Interest</b>
Inspection Frequency (# of visits per year)
Average time spent at each FSE (hours/visit)
Number of FSEs per inspector
Activities to be conducted at the FSEs (equipment inspection, education of employees, sewer cleaning, waste sampling, spill cleanup)
Analytical costs (approx. \$75/sample for analysis of total grease concentration)
Equipment costs (e.g., vehicle expenses, sewer cleaning equipment, portable pH meter, ice chest for sample transport)

***Database Maintenance Costs***

Staff time to maintain all databases must be estimated to determine an overall program budget. Initial database setup will be much more time-consuming than updating facility information during subsequent years. Updating facility information will include posting inspection results, logging correspondence between program staff and the FSEs, and tracking enforcement actions and responses.

## STEP 5 – PROVIDING OUTREACH

---

Educational outreach to all businesses that handle and dispose of FOG (FSEs, grease haulers, grease recyclers) should be the primary focus of a FOG Control Program. Often, the operators of these businesses do not understand the negative effects of their maintenance and disposal practices. Selecting the appropriate messages and determining the best methods for disseminating the messages is a vital step in establishing an effective FOG Control Program.

### **Establish Outreach Focus**

FOG Control Program personnel must establish the focus of the outreach efforts and relate those efforts to the specific goals of the FOG Control Program. The outreach should be directed towards FSE owners, FSE employees, grease haulers, and grease recyclers. Stakeholders of existing FOG programs agree that educating FSE employees and grease handlers on the goals and the requirements of a FOG control are essential to a successful program.

### **Conduct Stakeholder Meetings**

Meetings with restaurant owners, restaurant associations (e.g., the Washington Restaurant Association), grease haulers, grease recyclers, and any municipal agencies that may have overlapping responsibilities with the FOG Control Program should be conducted. These meetings can be used to assess the stakeholders' level of comprehension on FOG issues and to determine an overall program approach. Specific items to discuss include the appropriate type of outreach methods to employ, effective compliance motivations, and appropriate FOG handling and disposal methods.

### **Prepare Outreach Materials**

Outreach materials can be classified as informational or operational. Informational materials may contain the following:

- The impact of grease waste on the sewer system (overflows, increased O&M costs, increased sewer use rates)
- The fundamentals of the FOG Control Program (i.e., why the program is necessary)
- Information on types of grease removal equipment
- Proper grease disposal methods
- The effects of FOG-related sewer line blockages on businesses and the environment (public health and water quality concerns)

- The value of recycling yellow grease
- Contact information for questions or concerns
- Frequently asked questions

Operational materials may include the following:

- BMPs
- List of certified grease haulers and recyclers
- A list of approved disposal facilities
- Installation and maintenance requirements for grease removal equipment (interceptors and traps)
- Sizing and design specifications for grease removal equipment

Depending on the audience receiving the information, it may be useful to combine the two approaches.

### ***Examples of Outreach Materials***

Many different types of outreach materials have been produced for FOG Control Programs in the Pacific Northwest. Examples include posters detailing specific BMP handling methods, videos showing BMPs and equipment maintenance procedures, an introductory brochure to be distributed at initial inspection (Clean Water Services), guides for pollution prevention at FSEs (Oregon ACWA), and green business certifications (City of Palo Alto).

### ***Distribution Methods***

Distribution of the outreach materials can occur during inspections, during presentations at industry association meetings, during educational seminars for FSEs, through bill inserts, or on municipal web pages or social media.

## STEP 6 – INSPECTING FOOD SERVICE ESTABLISHMENTS

---

On-site monitoring of FSEs is important in terms of setting up a line of communication with the facility operators and emphasizing the importance of preventing FOG discharges. Inspections are also the best way to ensure compliance with ordinance provisions, permit terms and conditions, and FOG handling and disposal practices.

### **Determine Inspection Approach**

To ensure that a consistent message is delivered to all FSE personnel, an inspection program approach should be developed that is tailored to the goals of the FOG Control Program. Successful FOG program personnel and industry representatives agree that it is important to bear in mind that education of the FSE owners and operators is essential to program success. This can be achieved through a combination of discussion points and distribution of outreach materials. Discussion points during an inspection may include the negative effects of facility shutdowns due to sewer backups, recommendations for more effective FOG removal equipment saving money through water conservation, and avoiding fines for non-compliance.

### **Train Inspectors**

Comprehensive training must be undertaken for the FOG Control Program to ensure a consistent approach during inspections. A notebook containing all of the program documents, enforcement procedures, and outreach information should be prepared and distributed to the inspectors during the training session. It may be useful to include a review test inside the notebook. This test could be self-administered and used by the inspectors to personally assess their comprehension of inspection procedures.

The subject of interpersonal communication should also be addressed as part of the training program. This subject could be covered during a seminar with a contracted speaker or through required viewing of a videotape on communication. A segment of the training program may include a module on adversity training. This type of training is done to prepare new inspectors for difficult exchanges with FSE employees and situations when their authority may be challenged.

Additional training that may be applicable for the inspectors may be offered by manufacturers of grease removal equipment. This training may include courses and certification programs on the operation and maintenance of specific equipment. Related educational programs based on broader

topics such as collection system maintenance and FOG control in residential areas may also be available through occupational associations, such as the California Water Environment Association.

### **Conduct Inspections and Sampling**

Inspections of all FSEs within the jurisdiction of a FOG Control Program may take years depending on the program goals, number of sites, and inspector staffing. Developing an inspection prioritization plan is vital for determining an effective and functional inspection schedule.

Different priority levels may be assigned to FSEs in order to determine the inspection frequency and/or type of inspection for each FSE. For example, a high priority may be placed on historically noncompliant FSEs or on the FSEs associated with collection system hotspots. Another method of prioritizing the inspection program would be to choose an overall goal, such as establishing a routine maintenance schedule for FSEs with grease interceptors. The inspection frequency would then be determined by the recommended interval between cleanings. Once the priority is determined, an inspection plan (frequency, type of approach, follow-up intervals) should be developed based on available resources and program goals. Sampling of a facility's waste stream may be warranted for compliance purposes.

### ***Inspection Procedures***

Initially, FSE knowledge of the existence of the FOG program and the occurrence of inspections may vary greatly. Prior to initiating inspections, a letter (language-specific if possible) and educational outreach should be sent to the facility operator to introduce the program and inspection process. This letter should be signed by the highest level of authority related to the FOG program and should include contact names and numbers for the facility operators.

During inspections, inspectors should wear photo badges, arrive in an official municipal vehicle, if possible, and carry a copy of the introductory letter in order to clearly identify themselves and clarify the purpose of the inspection. Inspections may be announced or unannounced, depending on the regulatory framework of the agency or the type of relationship maintained between the inspectors and the FSE operators. A list of recommended equipment and paperwork to carry on inspections is presented in **Table 8**. A checklist for areas to inspect and questions to consider during an inspection is presented in **Table 9**. Both tables were developed based on the experiences of FOG Control Program inspectors.

**Table 8. Useful Inspection Items**

<b>Equipment</b>	<b>Paperwork</b>
Maps (County, City, GIS)	Inspection Checklist, FSE File



Manhole Pick	List of Plumbers (with disclaimer)
Hydrogen Sulfide gas detector <sup>1</sup>	
Depth Probe	List of Grease and Oil recyclers
Ratchet Set	Method of Documenting Inspection Results (e.g., PDA or inspection form)
Pipe Wrench (to open cleanouts)	
Mirror (for looking inside manholes and interceptors)	BMP List and Brochures
Cell Phone with Camera	Manufacturer's Drawings (for the type of grease removal device to be inspected)
Steel Toed Shoes	
Gloves/Safety Glasses	
Sample Bottles and Sampling Equipment	Authorized list of grease haulers (with disclaimer)
Fluorescent Safety Vest	

<sup>1</sup>An important safety consideration when performing inspections is measurement of the concentration of atmospheric hydrogen sulfide. Harmful hydrogen sulfide concentrations may exist at grease interceptor access points, collections system manholes, and/or lift stations.

**Table 9. FSE Inspection Checklist**

<b>Inspection Activities</b>
Request copies of receipts from grease handlers for services completed since the last visit.
Inspect grease removal equipment and cleaning logs to determine if the equipment is being operated and maintained properly.
Inspect connections to the grease trap or interceptor to ensure that only authorized equipment and fixtures discharge to the device.
Check for evidence of illicit dumping such as debris/loose screws in floor drains, missing or altered log entries, use of vegetable sink for washing dishes (vegetable sinks are not usually plumbed to a trap or interceptor).
Spot check for evidence of BMP implementation (scraper for dishes, spill kit, BMP poster, training log, drain screens, grease bins, etc.).
Collect samples for laboratory analysis of FOG concentration, if necessary.
Determine how waste grease is collected from work stoves, deep fat fryers, and grills.
Inspect grease barrels to determine if grease is being stored properly.
Discuss cleaning methods for roof vents and vent hoods. If they have a self-cleaning hood, where does the wash water discharge?
Request copies of receipts detailing pickup dates/volumes collected by grease recyclers.

### ***Sampling Procedures***

If deemed essential to the FOG Control Program's efforts, the effluent from grease interceptors can be sampled to determine the amount of FOG being discharged to the sewer system. A sample of the equipment effluent best represents the nature of the FSE's discharge. Other sampling options that may prove useful include sampling from the collection system just downstream of a suspected FOG discharger or sampling downstream of a complex of restaurants to determine the combined effects of their FOG discharges.

FOG samples must be collected in a muffled (or solvent washed), 1-Liter wide-mouthed glass container, preserved with hydrochloric acid. The samples must be refrigerated immediately after collection. Do not transfer the sample from one container to another, because FOG clings to the inside of sample containers and the transferred sample will not be representative of the FSE's discharge. The laboratory performing the analysis should provide the appropriate glassware with the preservative already added. The recommended method for analyzing total FOG concentration is EPA Method 1664. The method is not concentration-dependent, so no dilution is necessary, and the detection limit is 5 mg/L. The maximum holding time at 24°C is 28 days. If needed, an additional

analysis can be performed on the sample to determine the fraction of the FOG that originates from hydrocarbons.

The pH of the waste stream can also be used as an indicator of problem discharges. This characteristic is often overlooked but easily quantified. Use of a portable pH meter during an inspection or sampling event can identify unsafe atmospheric conditions and prevent deleterious effects on the collection system. It is not uncommon for grease interceptor discharges to have a pH around 4, which may violate effluent limits specified in the sewer use ordinance.

### **Follow-up Procedures**

After an inspection is performed, the findings should be immediately recorded in an inspection report, along with a determination of compliance standing for the FSE. An inspection summary letter or a copy of the inspection report may be sent to the FSE. If the FSE is in compliance, that determination should be stated. If the FSE is not in compliance, the actions to be taken should be in accordance with a developed enforcement response plan.

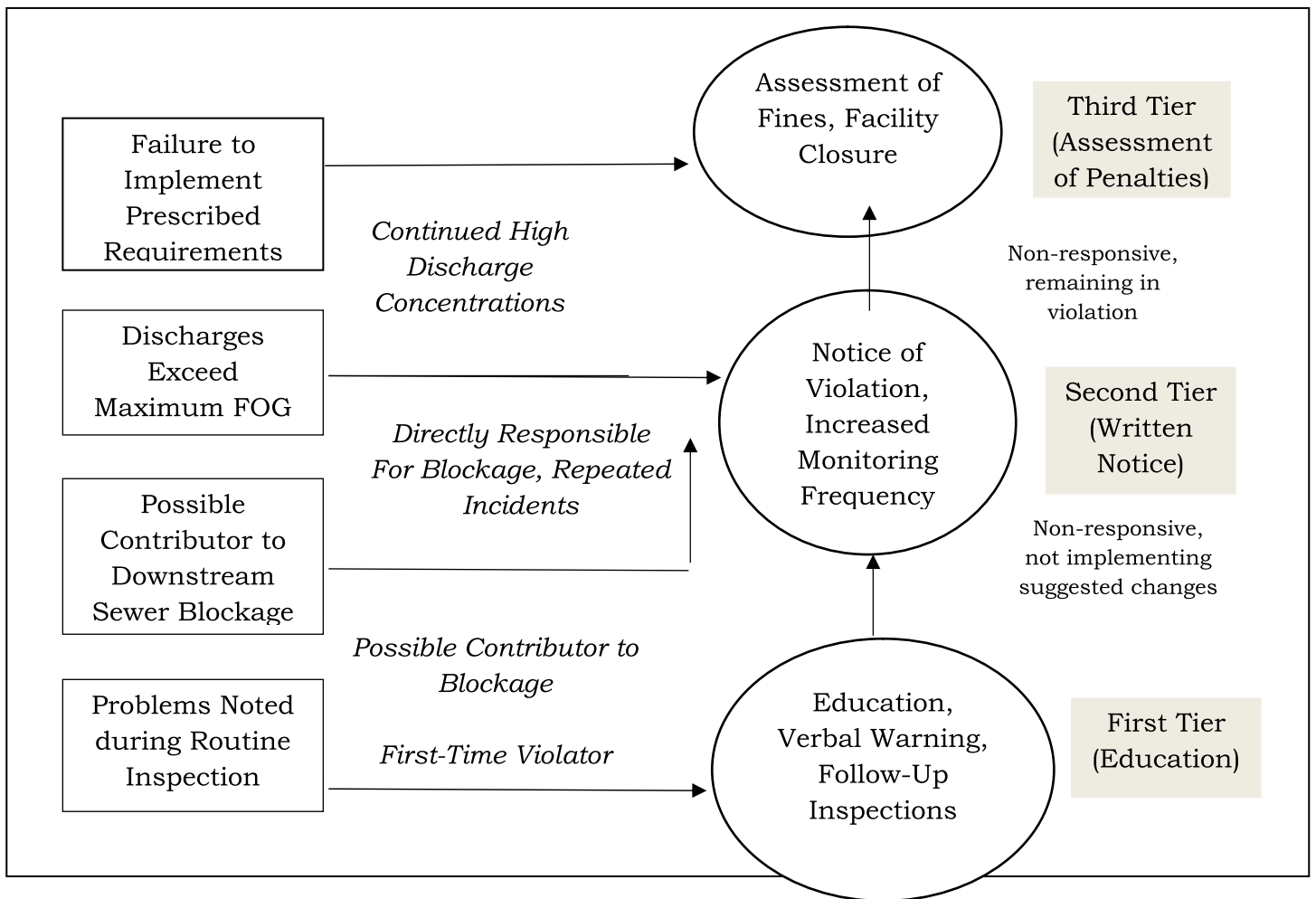
### **Develop Hierarchy of Enforcement Responses**

The hierarchy of enforcement responses will be based on the regulatory approach selected by the municipality, the severity of the violations, and provisions of the Sewer Use Ordinance. A typical enforcement hierarchy is depicted in **Figure 2**. Initial response to a FOG discharge or improper maintenance of grease control equipment may consist of a follow-up inspection, presentation of educational materials, a verbal warning, and a requirement to correct the problems found.

The second tier of enforcement response may include a Notice of Violation (NOV) or a Notice of Non-compliance which is a written record of the violation and required response. The NOV may include reasons for non-compliance along with required actions, deadlines for compliance, and a notice that a follow-up inspection will occur. These methods might include preparation of a written report to the municipality on how the discharges will be prevented, installation of grease removal equipment, or mandatory attendance at a workshop or a hearing. Periodic monitoring of the facility's discharges may also be instituted. Measuring FOG concentration may allow the municipality to determine if practical changes are occurring at the facility.

Failure to correct the problem by the time limit prescribed in the NOV may result in additional inspections, mandatory equipment installation, or elevation to the third tier of responses, assessment of fines, or facility closure. The procedures for assessing fines and closing a noncompliant facility must be detailed in the sewer use ordinance.

**Figure 2. Hierarchy of Possible Enforcement Responses To FOG Discharges from an FSE**



## **Appendix A**

Established BMPs and Informational Brochure

**Begins next page**

# FOG Program

## Fats, Oils & Grease

Proper disposal of fats, oils and grease protects your business, public health and the environment. It's the law, and it's the right thing to do.



CleanWater  Services

## It's cheaper and easier to prevent than clean up



Grease from first dishwasher cycle.

FOG buildup can clog sewer and drainage pipes, resulting in messy, costly overflows. It's bad for business, the environment and public health. Costs of a raw sewage backup may include:

- **Loss of business** while you're closed to clean up and get the kitchen back into service
- **Cleanup** of the premises by staff and a cleaning or restoration service
- **Hiring** a service to clean the sewer lines
- **Repairs or replacement** of the building, fixtures and equipment
- **Reimbursement** for damages to neighbors and the public sewer system
- **Higher** insurance premiums
- **Fines and penalties**

### Common sources of FOG

- **Fried foods**
- **Cooking meats**
- **Butter, ice cream, other dairy products**
- **Gravy and sauces**
- **Mayonnaise and salad dressings**

### FOG myths

**Myth:** Restaurant workers know how to prevent FOG problems.

**Fact:** Few employees have been properly trained to handle and dispose of cooking fats, oils and grease. The owner and management are responsible to train staff in best management practices (BMPs) and oversee the work of contractors hired to clean, remove and recycle FOG.

**Myth:** Pour hot water and detergent or degreasers into the drain to dissolve oil or grease.

**Fact:** That just pushes oil or grease deep into the building sewer pipe where it cools and coats the inside of the pipe. Eventually, the pipe will clog and cause raw sewage to back up into the building.

**Myth:** Storm drains and catch basins are for disposal of dirty water, debris, etc.

**Fact:** Outside drains are built to direct stormwater runoff to the nearest creek or wetland. Using them for any other purpose is a violation of the federal Clean Water Act.

**Myth:** If the sewers back up, the sewer utility will fix it.

**Fact:** Owners are responsible for the sewers on their property. If they damage or back up the public sanitary sewer or drainage systems, they must pay for cleanup and repair and may be subject to fines and penalties.

## Grease interceptors

All food/beverage establishments that are connected to the public sewer system must have an approved grease interceptor. It must be effectively sized, installed and maintained to keep FOG and food debris out of the public sewer system. If your business does not have an adequate grease interceptor, you will be required to install one.



Kitchens generate a lot of FOG.

A grease interceptor is designed to capture FOG before it discharges to the public sewer. All fixtures and drains in food/beverage service areas must connect to a grease interceptor. Grease interceptors need effective inspection and pumpout service. They are inspected by the local authority that enforces the federal Clean Water Act and related state and local laws, in partnership with the public works department.

### Types of grease interceptors

**Hydromechanical grease interceptors (HGIs)** manage FOG using flow control. They can be installed indoors and have relatively small FOG storage capacity.

**Gravity grease interceptors (GGIs)** manage FOG using gravity separation. They are installed outdoors and have larger FOG storage capacity than HGIs.

### General care for grease interceptors

Grease interceptors lose efficiency as they fill with FOG. The recommended cleaning frequency varies by the type of grease interceptor, types of food served and kitchen cleaning practices.

- Effectively size, install, and maintain a pumpout interval.
- Set an effective pumpout interval just prior to unacceptable levels of FOG leaving the grease interceptor.
- Train staff to inspect the work of contractors to ensure they used proper cleaning procedures before allowing contractors to leave the site.
- Reminder: Kitchen clean-up practices impact the grease interceptor (pumpout interval).
- A Preferred Pumper knows industry approved standards for grease interceptor cleaning and maintenance (see page 5 for more on Preferred Pumpers).
- Keep documentation of maintenance service done and where the waste was deposited.



## Food service establishment inspection

An inspector from the public utility will visit a food service establishment to ensure that it is effectively managing FOG in order to keep it out of the public sewer system. The inspector will assess the condition of the facility's grease interceptor(s). He or she will also assess FOG management practices and help teach kitchen staff about best practices for controlling FOG at the source.



Train staff to prepare for the inspection.

Following inspection, the inspector will issue a report that indicates any required corrective actions. Establishments that need to be inspected again will pay a minimum fee of \$84. Failure to comply with the local sewer use ordinance could result in monetary penalties, or the business could be ordered to cease all discharges to the public sewer system.

The chart below indicates the rankings and required response.

Inspection Rank	Establishment Response
Excellent or Good	Continue effective cleaning and maintenance.
Fair	Increase the frequency of cleaning and maintenance. The inspector may reinspect.
Poor Inspector issues Notice of Non-Compliance Reinspection required	The establishment is issued a notice of Non-Compliance that lists required corrective actions, the due date to complete the corrective actions and to notify the inspector for reinspection.  Failure to comply could lead to monetary penalties (up to \$25,000 per day/per violation) or ordered to cease discharge.

## Preparing for the inspection

When the inspector comes to inspect your grease interceptor and food service establishment's FOG management practices, please be prepared. Your preparation and assistance with the inspection will help the process run smoothly.

- Train staff to assist with opening and closing the grease interceptor (HGI).
- Keep a screwdriver or Allen wrench handy to open and close the grease interceptor.
- Keep maintenance records, training logs and FOG reports nearby.\*

\* Preferred Pumpers submit FOG reports for their clients.

**Inspectors prefer to coach and counsel rather than issue penalties. Ask for their advice.**

## Preferred Pumper Program

The Preferred Pumper Program is a registry of grease interceptor pump-out companies that have agreed to train staff on approved cleaning procedures and submit reports to the local public utility. For a list of companies, please go to [preferredpumper.org](http://preferredpumper.org).\*

A well maintained grease interceptor will reduce or eliminate building sewer issues and expenses related to food service operation. An effective pumpout interval is specific to an individual kitchen's menu and clean-up practices. For advice on an effective pumpout interval or more training materials, contact your local sewer agency or visit [cleanwaterservices.org/fog](http://cleanwaterservices.org/fog).



Oversee contractors for complete, correct service.

*\* You must ensure that your contractor(s) properly handle your establishment's FOG.*

## Exhaust hoods, vents and filters

This booklet does not fully address grease removal from exhaust hood systems (vents, filters) or fire prevention systems because these are regulated by other agencies. These systems must be cleaned and maintained to prevent fires and greasy buildup on roofs. Build up will cause degradation of roofing materials, which will wash into storm drains when it rains. Discharge of any contaminated rainwater to the public stormwater system is an illicit discharge by federal, state and local codes.

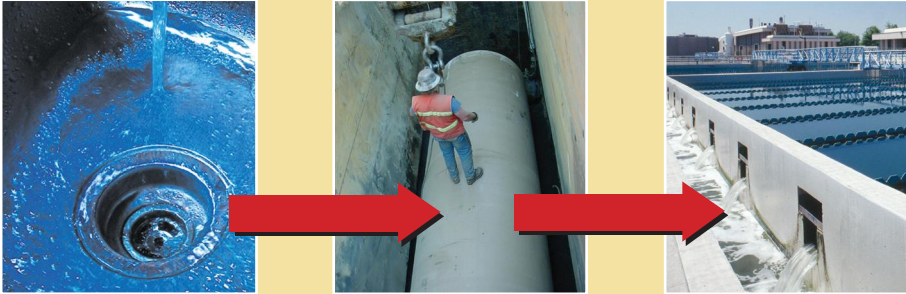
- Clean vent hoods and filters as needed.
- Inspect the exhaust system often enough to prevent grease buildup.
- Maintain the grease collection unit on the roof to protect your business and avoid penalties.
- Hire a service to clean and maintain the exhaust hoods, vents and filters frequently.
- Ensure proper disposal of waste and retain documentation of the disposal.



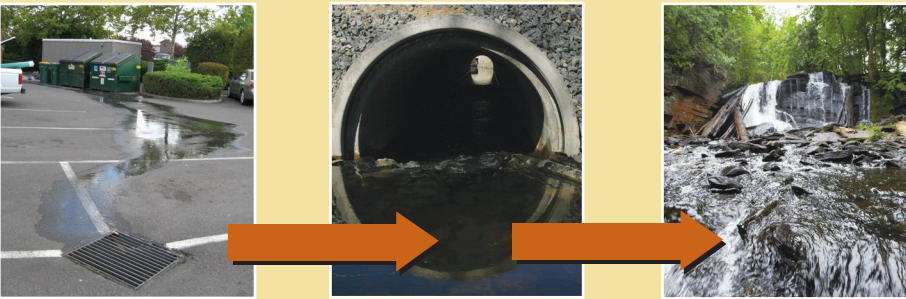
Exhaust systems must be FOG free.

## About inside and outside drains

It's important to keep FOG out of inside and outside drains to prevent sanitary sewer overflows, drainage backups and pollution of local waterways. Many people don't know that inside drains take wastewater *to the sanitary sewer system and a wastewater treatment facility*. Outside drains take stormwater runoff to pipes or ditches that lead *to the nearest wetland or creek*.



Inside drain → sanitary sewer → wastewater treatment facility



Outside storm drain/catch basin → pipe/ditch → creek or wetland

## Storm drains, catch basins and sumps

The public drainage system is designed to carry stormwater runoff and protect local creeks and wetlands from water pollution. It is the food service establishment and property owner's responsibility to maintain the storm drains and catch basins on or near the business premises. The catch basin under the storm drain or grate has a compartment or sump that is designed to capture debris, not chemicals.



**Storm drains are for rainwater. What goes in the storm drain goes straight to the nearest creek or wetland.**



- Inspect and clean storm drains, catch basins and sumps that serve the establishment.
- Increase the frequency of inspections and cleanings if necessary to prevent problems.
- Properly dispose of material from the catch basin and sump.
- Keep FOG and cleaners from polluting the public drainage system, creeks and wetlands.

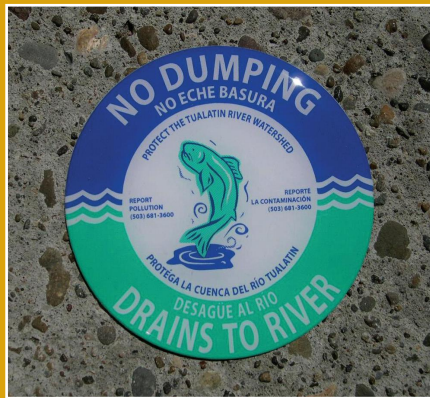
- Never wash or sweep liquids, suds, FOG or debris into storm drains.

Disposing of cleaning solutions or soapy water into gutters and storm drains can harm or kill wildlife, even if it's labeled nontoxic or biodegradable. Even when soap is not used, pollutants such as metals, grease and dirt are washed into drains and are harmful to aquatic organisms and wildlife.

Failure to properly clean and maintain the storm drain system can result in costly overflows, cleanup, business interruptions or closure. If the public drainage system is clogged or damaged, or pollutants reach waterways due to poor maintenance, the owner may be fined and required to pay cleanup costs.

It is the owner's responsibility to know if the debris cleaned from the catch basin qualifies as a hazardous material that must be handled separately from regular waste. Contact the local sewer utility or municipality for advice.

Place **"No Dumping – Drains to River"** markers near storm drains in parking lots and streets as a reminder that all the rain running off impervious surfaces flows directly to our local creeks, streams and wetlands without treatment. Contact the local Public Utility for markers.



## Is your staff trained in Best Management Practices?

It's easy to keep FOG out of the sewer and drainage systems if employees are trained.

### Proper disposal of Fats, Oils, and Grease (FOG)

Kitchen FOG belongs in the trash, a grease interceptor or a recycling container. Keep FOG in its place and out of the building and public sewer drainage systems.



Interceptor too full of FOG and not maintained properly; will cause building sewer problems.

- Recycle cooking grease, oil and food wastes.
- Contact your waste hauler or a rendering company to get a waste oil container.
- If containers or bins leak or spill, ask the vendor for new ones.
- Cover the rendering container (i.e., garbage corral) with a roof if possible.
- Clean up any spills or leaks immediately using dry methods.
- Prevent odor, rats and other pests with clean, closed rendering containers and dumpsters.
- Never dump used cooking oil down the drain.
- Never use hot water, detergent or degreasers to flush FOG down the drain; this pushes grease into the pipe where it will cool, congeal and clog the sewer.
- Never dump FOG (or anything!) on the street, parking lot or into storm drains.
- Schedule frequent FOG pickup or service.
- Keep records of training, cleaning, service, preventative maintenance and inspections.

**\$ TIP**

*Proper disposal of FOG is easier and cheaper—and that's good for your bottom line.*

## ices (BMPs)?

trained in best management practices (BMPs).

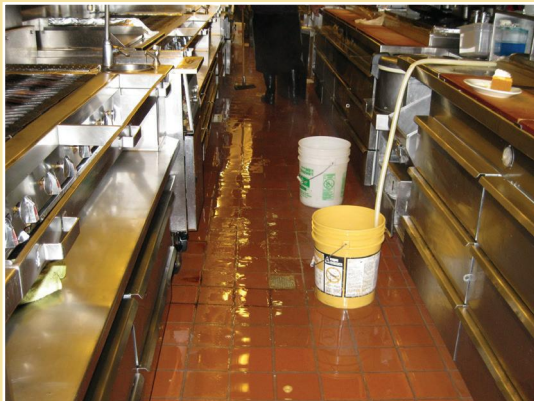
### Dry clean up

Before washing with water, use dry clean up methods to control FOG and food waste.

- ❑ Scrape or wipe instead of washing food waste from utensils, fixtures and equipment.
- ❑ Use rubber scrapers to remove FOG from cookware and serving surfaces.
- ❑ Scrape food waste into trash bins with plastic liners.
- ❑ Soak up oil and grease under fryer baskets with paper.
- ❑ Sweep floors before mopping.
- ❑ Wipe down work areas with paper towels.
- ❑ Place disposal and recycling containers within easy reach for kitchen employees.
- ❑ Sweep instead of hosing down parking lots, sidewalks and outside areas.



Dry wipe before washing.



Sweep floors before mopping.

Dry clean up methods have many benefits. Dry floors are safer than slick floors that may cause employees to slip and fall.



***Dry clean up saves water and energy costs.***

## Dishwashing, work areas, floors and spills

After dry scraping, wiping and sweeping, use these BMPs to keep FOG and food waste out of drains and sewers.



Keep FOG and food waste out of drains.

- Keep work areas clean.
- Install properly sized screens, baskets or strainers in sink and floor drains to catch food debris.
- Only fill FOG transfer containers halfway so that they are easier to lift. PREVENT SPILLS!
- Wash floor mats and greasy equipment in an area that drains to a grease interceptor—not outside.
- Never pour grease or oil into sinks, floor drains or onto a parking lot or street.
- When mopping, don't force food debris down the drain.
- Keep liquid waste out of trash or dumpster bins.
- Train workers to put FOG into recycling/rendering containers without spilling.
- Prevent spills through proper storage, handling and transfer of supplies.
- Provide proper equipment to handle FOG.
- Be careful not to drop or splash fats, oils and grease.
- Keep a spill kit with absorbent materials nearby.
- Clean up spills immediately.



***Disconnect the garbage disposal; this may qualify for a reduced sewer bill and will save water and energy.***

## Storage, trash and recycling areas

Property owners and the owners of food service establishments are responsible for keeping trash enclosure areas from contaminating stormwater.

- Store waste oil and cleaners in closed containers indoors or under cover outside.
- Provide dumpsters and bins that are large enough not to overflow.
- Repair or replace leaky dumpsters, compactors and trash/oil waste bins.
- Protect stormwater. Keep lids closed.
- Transfer containers should only be filled 1/2 to 3/4 when transferring oil waste to outside bin.
- Keep dumpster and storage areas clean and swept.
- Hire a contractor to clean-up contaminated trash enclosures. Keep documentation of work done and disposal site.



Trash and recycling areas reflect your kitchen practices.



Standing water due to clogged drains can damage pavement.



*Proper maintenance reduces costly repairs.*



## It's the law, and it's good business

Sewer overflows are harmful to public health and the environment. Federal, state and local laws require FOG control to protect people and water sources. It is the business and property owner's responsibility to comply with the law and ensure that employees and contractors are using BMPs that protect the public sanitary sewer, stormwater drainage systems and water quality. Property and business owners may be held liable for water quality violations, misuse of the public sanitary sewer and stormwater drainage systems, and resulting water pollution.



Grease clog inside a pipe.

## Did you know?

- Storm drains are for clean rainwater only.
- Food service establishments must install and maintain an approved grease interceptor.
- Obstruction of public sewers may result in penalties, fines and other costs.

For more information on these laws, please visit [cleanwaterservices.org/fog](http://cleanwaterservices.org/fog)



Inspector contact: \_\_\_\_\_

Call  
**503.681.5180**

E-Mail  
**fog@cleanwaterservices.org preferredpumper.org**

Visit

2550 SW Hillsboro Highway  
Hillsboro, Oregon 97123  
503.681.3600  
[cleanwaterservices.org](http://cleanwaterservices.org)

Clean Water  Services

Revised 05/2016

## Appendix B

### Online Resources

EPA Model Pretreatment Ordinance 2007

[https://www3.epa.gov/npdes/pubs/pretreatment\\_model\\_suo.pdf](https://www3.epa.gov/npdes/pubs/pretreatment_model_suo.pdf)

Oregon Association of Clean Water Agencies (Or ACWA) “Community-based Pretreatment Guidance and Resources”

<http://www.oracwa.org/cbpt-ordinance.html>

“Blueprint for Utility of the Future”

[https://www.wef.org/globalassets/assets-wef/direct-download-library/public/03---resources/waterresourcesutilityofthefuture\\_blueprintforaction\\_final.pdf](https://www.wef.org/globalassets/assets-wef/direct-download-library/public/03---resources/waterresourcesutilityofthefuture_blueprintforaction_final.pdf)

or

<http://www.nacwa.org/resources/utility-of-the-future>

EPA FOG Program guidance

[https://www3.epa.gov/npdes/pubs/pretreatment\\_foodservice\\_fs.pdf](https://www3.epa.gov/npdes/pubs/pretreatment_foodservice_fs.pdf)

City of Newberg, Oregon FOG web page

<https://www.newbergoregon.gov/operations/page/fats-oils-grease-prevention-program-fog>

City of Clinton, SC FOG Program

[https://www.cityofclintonsc.com/vertical/sites/%7B55F7B4D2-DDA3-4E24-B36B-2DCD490E9E5E%7D/uploads/fog\\_manual.pdf](https://www.cityofclintonsc.com/vertical/sites/%7B55F7B4D2-DDA3-4E24-B36B-2DCD490E9E5E%7D/uploads/fog_manual.pdf)

Orange County Sanitation District FOG Fact Sheet

[http://scap1.org/Collection%20Reference%20Library/Folder%20contains%20documents%20on%20Fats,%20Oils%20and%20Grease%20\(FOG\)/OCSD%20Core%20Elements%20of%20FOG%20Ordinance.pdf](http://scap1.org/Collection%20Reference%20Library/Folder%20contains%20documents%20on%20Fats,%20Oils%20and%20Grease%20(FOG)/OCSD%20Core%20Elements%20of%20FOG%20Ordinance.pdf)

Town of Prosper, Texas, FOG

<https://www.prospertx.gov/wp-content/uploads/ORD-16-22-Fats-Oils-and-Great-FOG-Outreach-Plan-2.pdf>

City of Dubuque, Iowa, FOG web

<http://www.cityofdubuque.org/2096/Fats-Oils-and-Grease-FOG-Program>

Thermaco Model FOG Ordinance

[http://thermaco.com/media/wysiwyg/PDFs/SampleFOGOrdinance\\_1\\_.pdf](http://thermaco.com/media/wysiwyg/PDFs/SampleFOGOrdinance_1_.pdf)

Dekalb County, Georgia, FOG

[http://www.dekalbcountyga.gov/sites/default/files/fog\\_management\\_program.pdf](http://www.dekalbcountyga.gov/sites/default/files/fog_management_program.pdf)

Clean Water Services of Washington County, Oregon, FOG web

<http://cleanwaterservices.org/for-business-industry/fats-oils-grease-program/>

Schier “Grease Monkey” sizing calculator

<https://greasemonkey.schierproducts.com/login>

## Appendix C



# **Plumbing and Drainage Institute**

## **Model Grease Ordinance**

The Plumbing & Drainage Institute has developed this model grease ordinance and offers it to aid municipalities and PTOW's to update or develop and establish their own grease ordinance. This document will download as a word document and can be copied and used in its entirety or modified as needed.

This Model ordinance is not intended to be limiting in any way, but rather is intended to provide a guideline. The use of this Model ordinance is voluntary. This Model ordinance is based on information believed to be reliable and is offered in good faith but without guarantee. The Plumbing and Drainage Institute and its member companies assume no responsibility or liability for the use of this Model ordinance. No warranty, express or implied, is made of the information contained in this Model ordinance by The Plumbing and Drainage Institute or by any of its member companies.

# Grease Ordinance

## **Background:**

Municipally-owned wastewater treatment facilities throughout the United States are detrimentally impacted by Fats, Oils and Greases (FOG). FOG is introduced primarily from food service establishments that prepare and serve large volumes of food; additional FOG can also originate from individual homes. Once in the sewer systems the FOG can clog sewer lines as it collects and coats the pipes, and this coating can get as hard as concrete. Over time sewer pipe flows can be restricted and the lines can even seal completely. The restricted flow can cause the sewer system to back up, resulting in a sanitary sewer overflow (SSO), where sewer water flows out of a manhole cover and along the ground. These overflows can then contaminate the ground, local water bodies and any property that the sewerage comes into contact with.

The improper management of FOG is not only a hazard to the environment and potentially the public's health, it also results in added financial burdens to both food service establishments and wastewater treatment plants. Lines clogged with FOG deposits require cleaning by the food establishment when it involves business owned pipes and by the wastewater treatment plant operator for sewer system pipes. Operations at treatment plants can also be negatively impacted.

This Ordinance covers effective methods that can be employed at food service establishments to prevent significant amounts of FOG from flowing through and clogging the disposal pipes. These methods involve the capture of the FOG, and disposal of the FOG or collection for recycling. Wastewater treatment plants have the authority, through the adoption of local ordinances, of requiring businesses to practice these methods of FOG discharge control.

# Model Grease Ordinance

## **Purpose and Policy:**

This sets forth uniform requirements for users of the Publicly Owned Treatment Works to capture and dispose of (FOG) and enables the City to comply with all applicable state and federal laws, including the Clean Water Act, 33 U.S.C., § 1251, *et seq.*; and the General Pretreatment Regulations, Title 40 C.F.R. Part 403. The objectives of this ordinance are:

1. To prevent the introduction of FOG into the Publicly Owned Treatment Works that will interfere with its operation;
2. To prevent the introduction of FOG into the Publicly Owned Treatment Works that could pass through the Publicly Owned Treatment Works, inadequately treated, into receiving waters, or otherwise be incompatible with the Publicly Owned Treatment Works;
3. To prevent sanitary sewer overflow (SSO), where sewer water flows out of a manhole cover and along the ground. These overflows can then contaminate the ground, local water bodies and any property that the sewerage comes into contact with.
4. To promote reuse and recycling of waste grease (FOG) from the Publicly Owned Treatment Works;
5. To enable the City with Federal, State and local Pollutant Discharge limits.

## **Section I. Applicability and Prohibitions**

- A) This ordinance shall apply to all non-domestic users of the Publicly Owned Treatment Works (POTW), as defined in Section II of this Ordinance.
- B) Grease interceptors shall not be required for residential users.
- C) The ordinance shall apply to both new existing facilities generating fats, oils, or greases as a result of food manufacturing, processing, preparation, or food service shall install, use, and maintain appropriate grease interceptors as required in Section III of this ordinance. These facilities include but are not limited to restaurants, food manufacturers, food processors, hospitals, hotels and motels, prisons, nursing homes, and any other facility preparing, serving, or otherwise making any foodstuff available for consumption.
- D) No user may intentionally or unintentionally allow the direct or indirect discharge of any fats, oils, or greases of animal or vegetable origin into the POTW system in such amounts as to cause interference with the collection and treatment system, or as to cause pollutants to pass through the treatment works into the environment.

## **Section II. Definitions**

- a) **Act:** Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 U.S.C. 1251, et. seq.
- b) **BOD:** The value of the 5-day test for Biochemical Oxygen Demand, as described in the latest edition of “Standard Methods for the Examination of Water & Wastewater.”
- c) **COD:** The value of the test for Chemical Oxygen Demand, as described in the latest edition of “Standard Methods for the Examination of Water & Wastewater.”
- d) **EPA:** The United States Environmental Protection Agency.
- e) **Fats, oils, and greases (FOG):** Organic polar compounds derived from animal and/or plant sources that contain multiple carbon chain triglyceride molecules. These substances are detectable and measurable using analytical test procedures established in 40 CFR 136, as may be amended from time to time. All are sometimes referred to herein as "grease" or "greases."
- f) **Generator:** Any person who owns or operates a grease trap/grease interceptor, or whose act or process produces a grease trap waste.
- g) **Grease interceptor:** An appurtenance or appliance that is installed in a sanitary drainage system to intercept non- petroleum fats, oils and grease (FOG) from a wastewater. There are two types of Grease interceptors, Gravity Grease Interceptors and Hydromechanical Grease Interceptors
- h) **Grease Interceptor, Gravity:**  
**Gravity Grease Interceptor:** A plumbing appurtenance or appliance that is installed in a sanitary drainage system to intercept non-petroleum fats, oils, and greases (FOG) from a wastewater discharge and is identified by volume, 30-minute retention time, baffle(s), a minimum of two compartments, a minimum total volume of 300 gallons, and gravity separation. These interceptors are designed by a registered professional engineer. Gravity Grease Interceptors are generally installed outside.
- i) **Grease Interceptor, Hydromechanical:**  
**Hydromechanical Grease Interceptor:** A plumbing appurtenance or appliance that is installed in a sanitary drainage system to intercept nonpetroleum fats, oils, and grease (FOG) from a wastewater discharge and is identified by flow rate, and separation and retention efficiency. The design incorporates air entrainment, hydro mechanical separation, interior baffling, and/or barriers in combination or separately, and an External flow control, with air intake (vent).
- j) **Grease Removal Device (GRD):** Any hydromechanical grease interceptor that automatically, mechanically removes non-petroleum fats, oils and grease (FOG) from the interceptor, the control of which are either automatic or manually initiated.
- k) **Grease Waste:** Material collected in and from a grease interceptor in the sanitary sewer service line of a commercial, institutional, or industrial food service or processing establishment, including the solids resulting from de-watering processes.

- l) **FOG Disposal System:** A grease interceptor that reduces nonpetroleum fats, oils, and grease (FOG) in effluent by separation, and mass and volume reduction.
- m) **Indirect Discharge or Discharge:** The introduction of pollutants into a POTW from any non-domestic source.
- n) **Interference:** A discharge which alone or in conjunction with a discharge or discharges from other sources inhibits or disrupts the POTW, its treatment processes or operations or its sludge processes, use or disposal, or is a cause of a violation of the city's TPDES permit.
- o) **pH:** The measure of the relative acidity or alkalinity of water and is defined as the negative logarithm (base 10) of the hydrogen ion concentration.
- p) **POTW or Publicly Owned Treatment Works:** A treatment works which is owned by a state or municipality as defined by section 502(4) of the Clean Water Act. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes all sewers, pipes and other conveyances that convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in section 502(4) of the Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works. For purposes of this ordinance, the terms “sanitary sewer system” and “POTW” may be used interchangeably.
- q) **Transporter** means a person who is registered with and authorized by the TCEQ to transport sewage sludge, water treatment sludge, domestic septage, chemical toilet waste, grit trap waste, or grease trap waste in accordance with current regulations.
- r) **TSS:** The value of the test for Total Suspended Solids, as described in the latest edition of “Standard Methods for the Examination of Water & Wastewater.”
- s) **User:** Any person, including those located outside the jurisdictional limits of the city, who contributes, causes or permits the contribution or discharge of wastewater into the POTW, including persons who contribute such wastewater from mobile sources.

### **Section III. Installation and Maintenance Requirements**

#### **A) Installations**

- 1) **New Facilities.** Food processing or food service facilities which are newly proposed or constructed, or existing facilities which will be expanded or renovated to include a food service facility, where such facility did not previously exist, shall be required to design , install, operate and maintain a grease interceptor in accordance with locally adopted plumbing codes or other applicable ordinances. Grease interceptors shall be installed and inspected prior to issuance of a certificate of occupancy.



- 2) Existing Facilities. Existing grease interceptors must be operated and maintained in accordance with the manufacturer's recommendations and in accordance with these Model Standards, unless specified in writing and approved by the POTW.
- 3) All grease interceptor waste shall be properly disposed of at a facility in accordance with federal, state, or local regulation.

**B) Cleaning and Maintenance:**

- 1) Grease interceptors shall be maintained in an efficient operating condition at all times.
- 2) Each grease interceptor when cleaned shall be fully evacuated.

**C) Self-Cleaning; Hydro-mechanical Grease interceptors only.**

- 1) Grease interceptor self-cleaning operators must receive approval from the POTW to remove grease from their own grease hydro –mechanical grease interceptors. The following conditions shall apply:
  - 1a) the grease interceptor is no more than 100 GPM size.
  - 1b) proper on-site material disposal methods are implemented (e.g. absorb liquid into solid form and dispose into trash);
  - 1c) the local solid waste authority allows such practices;
  - 1d) grease waste is placed in a leak proof, sealable container(s) located on the premises and in an area for the transporter to pump-out; and
  - 1e) detailed records on these activities are maintained.
- 2) Grease interceptor self-cleaning operators must submit a completed self-cleaning request to the POTW for approval. The written request shall include the following information:
  - 2a) Business name and street address;
  - 2b) Grease interceptor operator name, title, and phone number;
  - 2c) Description of maintenance frequency, method of disposal, method of cleaning and size (in gallons) of the grease interceptor; and
  - 2d) Signed statement that the operator will maintain records of waste disposal and produce them for compliance inspections.
- 3) Self-cleaners must adhere to all the requirements; procedures and detailed record keeping outlined in their approved application, to ensure compliance with this ordinance. A maintenance log shall be kept by self-cleaning operators that indicates, at a minimum, the following information:
  - 3a) Date the grease trap/interceptor was serviced;
  - 3b) Name of the person or company servicing the grease trap/interceptor;
  - 3c) Waste disposal method used;
  - 3d) Gallons of grease removed and disposed of;
  - 3e) Waste oil added to grease interceptor waste; and
  - 3f) Signature of the operator after each cleaning that certifies that all grease was removed, disposed of properly, grease trap/interceptor was thoroughly cleaned, and that all parts were replaced and in operable condition.

- 4) Violations incurred by grease interceptors self-cleaners will be subject to enforcement action including fines and/or removal from the self-cleaner program.

#### D) **Cleaning Schedules**

- 1) Grease interceptors shall be cleaned as often as necessary to ensure that sediment and floating materials do not accumulate to impair the efficiency of the grease interceptor; to ensure the discharge is in compliance with local discharge limits; and to ensure no visible grease is observed in discharge.
- 2) Grease interceptors shall be completely evacuated a minimum of every thirty (30) days, or more frequently when:
  - 2a) twenty-five (25) percent or more of the wetted height of the grease trap or grease interceptor, as measured from the bottom of the device to the invert of the outlet pipe, contains floating materials, sediment, oils or greases; or
  - 2b) the discharge exceeds BOD, COD, TSS, FOG, pH, or other pollutant levels established by the POTW; or
  - 2c) if there is a history of non-compliance.
- 3) Any person who owns or operates a grease interceptor may submit to the POTW a request in writing for an exception to the thirty (30) day cleaning frequency of their grease interceptor. The POTW may grant an extension for required cleaning frequency on a case-by-case basis when:
  - 3a) the grease interceptor owner/operator has demonstrated the specific interceptor will produce an effluent, based on defensible analytical results, in consistent compliance with established local discharge limits such as BOD, TSS, FOG, or other parameters as determined by the POTW, or
  - 3b) less than twenty-five (25) percent of the wetted height of the grease interceptor, as measured from the bottom of the device to the invert of the outlet pipe, contains floating materials, sediment, oils or greases
- 4) In any event, a grease interceptor shall be fully evacuated, cleaned, and inspected at least once every 90 days.

#### E) **Manifest Requirements**

- 1) Each pump-out of a grease interceptor must be accompanied by a manifest to be used for record keeping purposes.
- 2) Persons who generate, collect and transport grease waste shall maintain a record of each individual collection and deposit. Such records shall be in the form of a manifest. The manifest shall include:
  - 2a) name, address, telephone, and commission registration number of transporter;
  - 2b) name, signature, address, and phone number of the person who generated the waste and the date collected;
  - 2c) type and amount(s) of waste collected or transported;

- 2d) name and signature(s) of responsible person(s) collecting, transporting, and depositing the waste;
  - 2e) date and place where the waste was deposited;
  - 2f) identification (permit or site registration number, location, and operator) of the facility where the waste was deposited;
  - 2g) name and signature of facility on-site representative acknowledging receipt of the waste and the amount of waste received;
  - 2h) the volume of the grease waste received; and
  - 2i) a consecutive numerical tracking number to assist transporters, waste generators, and regulating authorities in tracking the volume of grease transported.
- 3) Manifests shall be divided into five parts and records shall be maintained as follows.
- 3a) One part of the manifest shall have the generator and transporter information completed and be given to the generator at the time of waste pickup.
  - 3b) The remaining four parts of the manifest shall have all required information completely filled out and signed by the appropriate party before distribution of the manifest.
  - 3c) One part of the manifest shall go to the receiving facility.
  - 3d) One part shall go to the transporter, who shall retain a copy of all manifests showing the collection and disposition of waste.
  - 3e) One copy of the manifest shall be returned by the transporter to the person who generated the wastes within 15 days after the waste is received at the disposal or processing facility.
  - 3f) One part of the manifest shall go to the local authority.
  - 3g) Copies of manifests returned to the waste generator shall be retained for five years and be readily available for review by the POTW.
  - 3h) Alternative Treatment

F) **Bioremediation:**

Bioremediation media shall only be used with approved Fog Disposal Systems ASME A112.14.4

G) **Compliance and Penalties:**

All testing designed to satisfy the criteria set forth in Section III (f) (3) shall be scientifically sound and statistically valid. All tests to determine oil and grease, TSS, BOD, COD, pH, and other pollutant levels shall use appropriate tests which have been approved by the Environmental Protection Agency which are defined in Title 40, Code of Federal Regulations, Part 136. Testing shall be open to inspection by the POTW, and shall meet the POTW's approval.

H) **Prohibited Practices:**

No person shall introduce, or cause, permit, or suffer the introduction of any surfactant, solvent or emulsifier into a grease interceptor. Surfactants, solvents, and emulsifiers are materials which allow the grease to pass from the grease interceptor into the collection system, and include but are not limited to enzymes, soap, diesel, kerosene, terpene, and other solvents.

I) **Compliance Monitoring:**

- 1) **Right of Entry.** The POTW shall have the right to enter the premises of any user or potential user to determine whether the user is complying with all requirements of this chapter and any wastewater discharge permit or order issued hereunder. Users shall allow the POTW ready access to all parts of the premises for the purposes of inspection, sampling, records examination and copying, and the performance of any additional duties.
  - a) Where a user has security measures in force which require proper identification and clearance before entry into its premises, the user shall make necessary arrangements with its security guards so that, upon presentation of suitable identification, the POTW will be permitted to enter without delay for the purposes of performing specific responsibilities.
  - b) The POTW shall have the right to set up on the user's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the user's operations.
  - c) The POTW may require the user to install monitoring equipment as necessary such as FOG sensing and alarm devices complying with PDI G102. The facility's monitoring equipment shall be maintained at all times in a safe and proper operating condition by the user at its own expense.
  - d) Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the user at the written or verbal request of the POTW and shall not be replaced. The costs of clearing such access shall be borne by the user.
  - e) Unreasonable delays in allowing the POTW access to the user's premises shall be a violation of this ordinance.

- 2) **Search Warrants.** If the POTW has been refused access to a building, structure, or property, or any part thereof, and is able to demonstrate probable cause to believe that there may be a violation of this chapter, then the POTW may seek issuance of a search warrant.

#### **Section IV. Schedule of Penalties**

- A) If the POTW determines that a generator is responsible for a blockage of a collection system line the generator shall owe a civil penalty of \$1,000 for the first violation, \$1,500 for a second violation, and \$2,000 for the third violation within a two-year period. Continuous violations shall result in an increase in penalty by \$500 and may also result in termination of services.
- B) Any person violating any of the provisions of this Ordinance shall be subject to a written warning for the first violation, a \$1,000 civil penalty for the second violation, a \$1,500 civil penalty for the third violation, and a \$2,000 civil penalty for the fourth violation within a two-year period. Consistent violations will result in a \$500 increase in civil penalty and may result in termination of service.

#### **Section V. Judicial Enforcement Remedies**

**Injunctive Relief.** When the POTW finds that a user has violated or continues to violate any provision of this chapter, a wastewater discharge permit, or order issued hereunder, or any other pretreatment standard or requirement, the POTW may petition the District Court for the issuance of a temporary or permanent injunction, as appropriate, which restrains or compels the specific performance of the wastewater discharge permit, order, or other requirement imposed by this chapter on activities of the user. The POTW may also seek such other action as is appropriate for legal and/or equitable relief, including a requirement for the user to conduct environmental remediation. A petition for injunctive relief shall not be a bar against or a prerequisite for taking any other action against a user.

# Appendix D

## City of Gresham FOG Policy

### Background

Excess fats, oils and grease (FOG) in wastewater discharged from commercial establishments, such as food service establishments and multi-family complexes, adhere to sewer pipe walls restricting flow. The buildup of FOG can eventually impede flow causing sewage to back up onto the surface or into people’s homes and businesses.

Article 4.40.040 (2) of the Gresham Revised Code (GRC) prohibits the discharge of substances obstructing sewer flow. Facilities generating FOG are regulated per the following GRC articles; 4.45.025 (1) requires installation of pretreatment devices necessary to comply with prohibitions. 4.45.025 (2) pretreatment devices must be operated and maintained. 4.45.110 (1) requires submittal of periodic reports on compliance.

Food services establishments (FSE) are defined as any facility that prepares and/or serves food or beverages. There are two basic types of pretreatment devices used by food service establishments to control FOG discharges to the sanitary sewer.

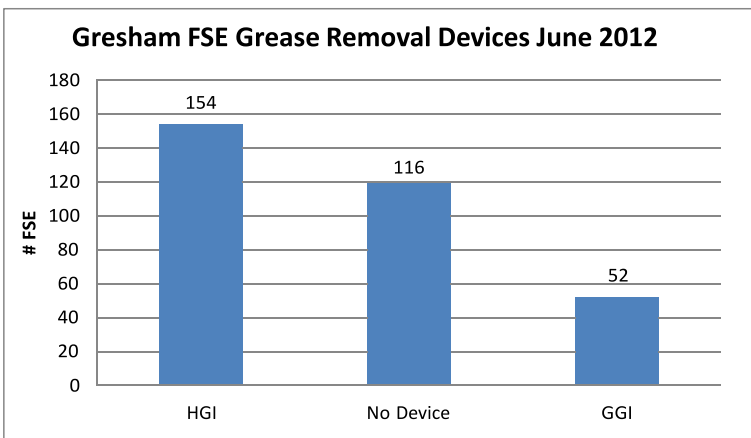
#### 1. Gravity Grease Interceptors (GGI)

- Large capacity in-ground external devices.
- Range from 500 gal to 5000 gal volumes.
- Has capacity to store FOG generated from fast food, full service restaurants, bakeries, meat markets, high volume coffee shops, and ice cream shops.

#### 2. Hydro-mechanical Grease Interceptors (HGI)

- Low capacity internal under the sink devices.
- Limited FOG capacity best suited for sandwich shops (no frying) and delis.
- Due to low installation costs and out of date plumbing codes, these devices have been widely used. In many applications, the FSE generates more FOG than the device has capacity to hold. In these instances, FOG passes through the device and into the sewer system.

### Graph #1



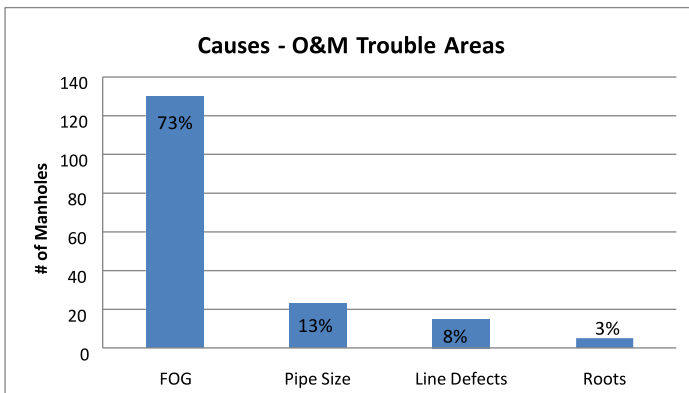
Graph #1 above shows the distribution of pretreatment devices in the Gresham jurisdiction. Thirty six percent (36%) of area food service establishments have no pretreatment device while only 16% have the best available technology (GGI).

**Problem**

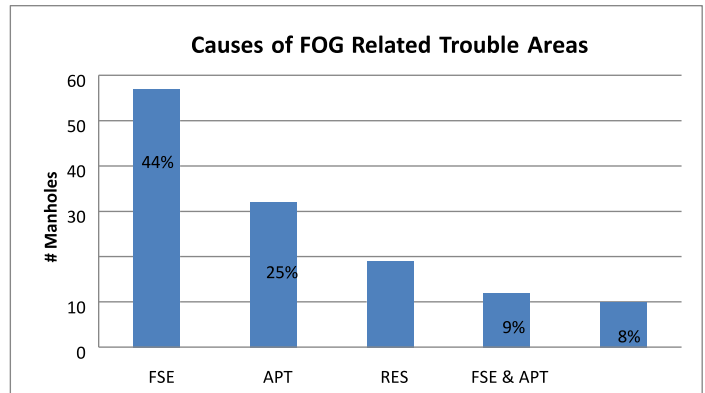
Excess FOG in the collection system obstructs flow and leads to sanitary sewer overflows (SSO), which expose the public and environment to disease organisms and pollutants. SSO’s are prohibited by the Federal Clean Water Act and the City of Gresham’s NPDES permit, and the City can receive enforcement penalties and fines from the DEQ. They can also cause sewage to backup into customer’s homes, which is a liability for the City. To reduce FOG related SSOs, the Wastewater Division’s Operations crews clean and remove FOG from impacted segments of the sewer system on a quarterly basis at an annual cost of approximately \$75,000. FOG has an effect on asset management as affected sewer pipe has a shorter life expectancy. In 2012/13, the City replaced 586 feet of FOG impacted pipe along Burnside at an estimated cost of \$81,000. The City of Gresham FOG policy addresses how food service establishments and apartment complexes will be regulated to reduce the discharges of fats, oils and grease.

Sewer pipe sections requiring increased cleaning frequencies, quarterly to semi-annual, are identified as Trouble Areas. As illustrated in graph #2, FOG is the root cause for 73% of all Trouble Areas in Gresham. Looking at those FOG impacted areas, 78% are caused by FSEs and apartment complexes as shown in graph #3.

**Graph #2**



**Graph #3**



**FSE Pretreatment Installation**

1. All new FSEs are required to have and maintain the appropriately sized pretreatment devices per Oregon Specified Plumbing Code on all FOG and potential FOG bearing drains.
2. All existing FSEs with pretreatment devices are required to keep and maintain them.
3. Collection system Trouble Areas are the main focus of the Pretreatment program. Pretreatment program staff assess food service establishments in these Trouble Areas. Those with no or inadequate grease removal devices are required to install devices with increased capacity.
4. FSEs that undergo a remodel will install a pretreatment device meeting current code.
5. FSEs replacing a failed pretreatment device will install a pretreatment device meeting current code.

6. When determining the type of device applicable to an FSE, the City will use the Pretreatment Device Determination Matrix (attachment A).
7. An FSE that is required to retrofit to a GGI, may appeal that decision based on the following factors;
  - a. The FSE is a single service kitchen with no food preparation (heat/serve only), and uses only disposable service items.
  - b. It is impossible or impracticable to install, operate or maintain a GGI because:
    - i. There is not adequate space for installation and/or maintenance of a GGI or
    - ii. There is not adequate slope for gravity flow between kitchen plumbing fixtures and the GGI or between the GGI and sanitary sewer system and
    - iii. It is not feasible to reroute the plumbing to a GGI.
8. If an HGI is allowed in lieu of a GGI, the FSE must install the largest capacity HGI as allowed by the available space. All potentially grease bearing fixtures are required to flow through the HGI or multiple HGIs.
9. Should the HGI prove inadequate in preventing accumulation of FOG in the sewer system, the FSE may be required to upgrade pretreatment.
10. GGI Grant Program – To help defray installation costs, beginning in 2012 the COG wastewater division will provide a grant to FSEs retrofitting to a GGI. Up to \$5000 will be available to each qualifying FSE. Funding is limited and grants will be awarded on a first-come, first-serve basis to applicants meeting the grant terms until the grant monies are exhausted.

#### FSE Pretreatment Maintenance

1. Routine Servicing - Servicing includes removal of all contents for proper disposal, cleaning of grease and solids from the device and inspection to ensure the device is functioning properly.
2. Frequency – Devices must be serviced when the depth of solids and FOG in the device exceed 25% of the device’s functional depth, but not at an interval greater than
  - a. HGI - Minimum monthly servicing frequency is required.
  - b. GGI - Minimum quarterly servicing frequency is required.
3. Upon servicing, a COG approved pump out report must be completed and submitted to the City no later than 10 days after the service.
4. If an FSE determines that factors unique to its operation warrant less frequent servicing it may request a reduced maintenance frequency from the city. The FSE must be in full compliance with this Policy and the Gresham Revised Code chapter 4. In making the determination, the City will consider the following factors;
  - a. Type of food prepared/served,
  - b. Type of wares used for serving,
  - c. Hours and days of operation,
  - d. Pretreatment device accumulation rates based on data from a minimum of 3 consecutive pump out reports.

Frequencies cannot be reduced lower than semi-annual for GGIs and bimonthly for HGIs. If a reduced frequency proves ineffective in controlling FOG accumulation, then the minimum servicing frequency will be re-established.

#### Multifamily-Apartment Complexes

Multifamily-Apartment Complexes (MAC) pose a unique problem in controlling FOG discharges to the City collection system since there is no pretreatment available for these commercial users. Reduction of



FOG discharges requires best management practices (BMP) to be implemented by the complex residents.

1. The City has created a multifamily FOG BMP kit that includes;
  - a. Grease can lids and scrapers for each resident and
  - b. A CD providing the following e-documents for MAC management:
    - i. FOG disposal flyers and posters,
    - ii. Letter template for management to send to tenants describing problem, and
    - iii. Lease agreement addendum language prohibiting disposal of grease in the drains.
2. The City will focus compliance efforts on MACs contributing FOG to a Trouble Area.

### FOG Compliance Efforts

FSE Compliance – There are two main non-compliance issues for food service establishments.

1. Failure to Service Device
  - a. Each month the City will generate a report from its compliance database (Linko) detailing FSEs that are late in reporting device pump out.
  - b. The City will follow the sequence below for routine monthly enforcement, unless other factors, such as repeated violations or immediate threat to public health or environment, warrant alternative actions:
    - i. Courtesy Notice – Send day after report is due
    - ii. Required Action – Send 7 days after Courtesy Notice sent
    - iii. Required Action with Civil Penalty – penalty progression: \$350, \$600 and \$1000 – send 7 days after previous enforcement action.
2. Failure to Install Adequately Sized Device
  - a. FSE located in Trouble areas with inadequate pretreatment devices will be required to install increased pretreatment capacity.
  - b. The City will follow the sequence below for inadequately sized devices, unless other factors, such as repeated violations or immediate threat to public health or environment warrant alternative actions:
    - i. Required Action
    - ii. Required Action Reminder
    - iii. Required Action with Civil Penalty – penalty progression: \$350, \$600 and \$1000

### Multifamily Compliance

1. MACs contributing FOG to trouble areas will be required to implement BMPs with their tenants.
2. The City will follow the sequence below for addressing MACs contributing to Trouble Areas:
  - a. Required Action with management/owner meeting. Distribute BMP materials.
  - b. Operations clean City sewer pipe approximately 1 month after meeting.
  - c. Six months after cleaning, TV line to evaluate BMP effectiveness.
  - d. Issue Required Action reminder
  - e. Every six months TV line, if significant accumulation found, clean and bill costs to MAC.

## Moving Forward w/ FOG

### GGI tracking and enforcement

- Determine which FSE's need enforcement
- Determine which Preferred Pumpers need encouragement

New FSEs – Develop new FSE packet for hand delivery

Set Quarterly PO Events in Linko

### Enforcement- enter enforcement actions in Linko

1. Courtesy Notices – Send day after due
2. 1<sup>st</sup> Required Action Letters Sent – Send 7 days after previous action
3. RAL w/ Penalties Sent – Send 7 days after previous action

How do we handle HGIs w/ monthly PO requirements – Follow above enforcement response

### Inspections – Focus on pump out performance

- Inspect after receiving PO report
  - Try to view interceptor within 14 days of PO
  - Pass or fail
  - Preferred and Self pumpers
  - Failed inspections
    - Self-pumpers – RA w/ 7 days
      - Enter enforcement action in Linko
      - Follow up inspection
    - Preferred pumpers – Contact PP for re-pump out
- Documentation
  - Field book
  - Enter inspection in Linko
  - Enter inspection enforcement actions in Linko

**Monthly Compliance Data** – At the end of each month produce report w/ this data:

#### Compliance

# PO Reports Due

# PO Reports Received

#### Enforcement – Enter enforcement action for FSE

# Courtesy Notices Sent – Day after due

# 1<sup>st</sup> Required Action Letters sent – 7 days after previous action

# RAL w/ Penalties Sent – 7 days after previous action

#### Inspections

# Preferred Pumper/Self Pumper Inspections Conducted

# Inspections Passed

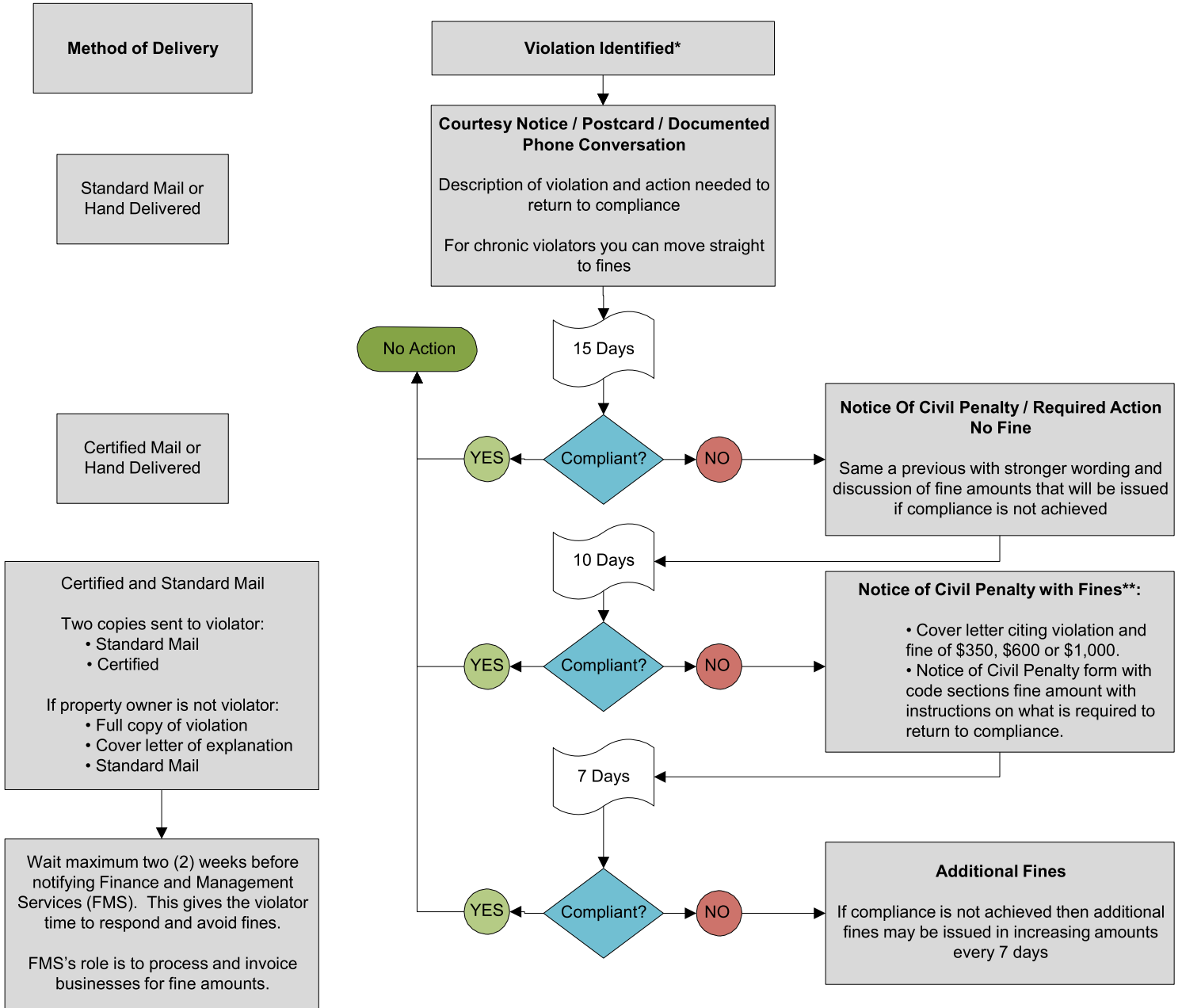
# Failed Inspections by Preferred Pumper

# Enforcement actions for Self-pumpers

# Appendix E

## City of Gresham FOG Fine Process Diagram

### Food Service Establishment Routine Enforcement Process



\*For extra-jurisdiction businesses follow ERP

\*\* At any point if business responds and returns to compliance the fine can be forgiven

## Appendix F

### Jurisdiction Memo, City of The Dalles

# IMPLEMENTATION PROCEDURES MANUAL

## Manual Revisions for 2015 DEQ Audit February 2018

### Excerpted procedures for City of The Dalles Planning Department

#### **Procedure for maintaining an up-to-date inventory of industrial users**

**Purpose:** Through the City's NPDES permit, the City is required to "update its inventory of industrial users at a frequency and diligence adequate to ensure proper identification of industrial users subject to pretreatment standards, but no less than once per year." To this end, the Oregon DEQ requires an ongoing process for receiving survey information from all commercial and industrial applications for discharge to the City sanitary sewer system in order to keep the inventory up to date and assure that discharge permits are issued as necessary.

1. When a Commercial or Industrial Applicant goes to the Planning Department for a Building Permit, or a Proposed Change of Use Permit or a Change of Ownership Form, all businesses are required to fill out a Proposed Change of Use Permit Application before occupancy of existing buildings, including those that rent buildings.
2. The Planning Department will require that all commercial and industrial applicants receive an IPP packet and complete a Wastewater Survey as part of the permit process.
3. The completed Wastewater Survey will be included in the packet routed from Planning to the Public Works Department. Planning will retain a copy of all material sent in the packet.
4. The City engineer will route the survey to the Public Works Regulatory Compliance manager when the packet is received.
5. The Regulatory Compliance Manager will log in the survey, retain the original, and route a copy of the survey to the Jacobs Project Manager.
6. The Jacobs Project Manager will review the survey information, contact the applicant if further information is needed, and document the decision as to whether an IPP permit application is required.
7. Within a 7 to 10 day period, the Regulatory Compliance Manager will receive the permitting decision and notify the Planning Department of the decision by email.
8. The original finalized survey with documented discharge permit review and decision is retained by the Regulatory Compliance Manager. A copy of the finalized survey with documented discharge permit review and decision will be retained by the Jacobs Project Manager and another copy will be routed back to the Planning Department for filing.
9. If a discharge permit is required through the City's IPP or local program, the application and permit process will be administered through the Public Works Department.

e

c



**CITY OF THE DALLES**  
Department of Public Works  
1215 West First Street  
The Dalles, Oregon 97058

---

## MEMORANDUM

**DATE:** March 23, 2018; Updated April 19, 2018; Updated June 4, 2018; Updated October 12, 2018 (added Oregon Department of Agriculture info on pages 2 & 5 of 9); Update January 17, 2019 (added Public Health Authority info on page 6 of 9)  
**TO:** Dave Anderson, Public Works Director; Rick Wolf, Jacobs Project Manager  
**FROM:** Jill Hoyenga, Regulatory Compliance Manager  
**RE:** Grease Trap Jurisdiction Advisory

The purpose of this memo is to provide communications support for those conducting grease trap enforcement. I will include approved information from this advisory in the Local Program Manual as an appendix to the sector control section once we get agreement upon direction.

**Advisory:** During an inspection we should not tell the customer that a dishwasher should not be connected to the grease trap.

**Authority Having Jurisdiction (AHJ): Oregon Plumbing Specialty Code**

**Citation: Chapter 10: Traps and Interceptors**

### **1014.0 Grease Interceptors.**

**1014.1 Where Required.** Waste pretreatment is required in all Food Service Establishments. Waste pretreatment is also required in other establishments as determined by the Building Official, where grease is introduced into the drainage or sewer system. An approved type of grease interceptor(s) complying with the provisions of this section shall be correctly sized and properly installed.

All plumbing fixtures, garbage disposals, dishwashers, floor drains, and cooking equipment, with drain connections in food and/or beverage preparation areas of all Food Service Establishments shall be connected to the grease interceptor(s).

**Advisory:** Do not cause the customer to question the location of the grease trap.

**Authority Having Jurisdiction (AHJ): Oregon Plumbing Specialty Code**

**Citation: Chapter 10: Traps and Interceptors**

**1009.2 Approval.** The size, type, and location of each interceptor (clarifier) or separator shall be approved by the Building Official.

**1009.5 Location.** Each interceptor (clarifier) cover shall be readily accessible for servicing and maintaining the interceptor (clarifier) in working and operating condition. The use of ladders or the removal of bulky equipment in order to service interceptors (clarifiers) shall constitute a violation of accessibility.

**1014.3.4.1 Interceptors.** Interceptors shall be placed as close as practical to the fixtures they serve.

**Advisory:** Use caution when discussing the temperature of water entering a grease trap.

**Discussion:** Water temperature in a FSE is under the jurisdiction of Oregon Administrative Rules for Food Sanitation.

Water temperature entering the plumbed drainage system of any facility, including a FSE, is under the jurisdiction of Oregon Plumbing Specialty Code.

The temperature limit in The Dalles Municipal Code does not establish authority to specify a temperature for water entering the grease trap.

**Authority Having Jurisdiction (AHJ):**

**County Public Health Inspector:** The North Central Public Health has inspection authority for restaurants and some mobile food units.

**State Oregon Department of Agriculture (ODA) Inspector:** The Oregon Department of Agriculture has inspection authority for retail food establishments, food storage warehouses, domestic kitchen food processor, slaughter facilities, non-slaughter meat processing facilities, and package meat sellers, bakeries, food processing establishments, cannabis food processing facilities, cannabis retail food establishments, and egg handlers. (per a conversation with ODA Food Safety Specialist Naaman Smith on October 12, 2018 and reference the ODA website <http://oda.state.or.us/dbs/licenses/search.lasso?&division=fsd> )

The original memo only included information from the OAR authorizing County health inspectors. Since that time I have learned that the Oregon Department of Agriculture has identical language in OAR 603-025-0030 4-501.110 that grants this agency jurisdiction regarding hot water.

Temperatures of interest:

- Minimum hot water sanitation temperature between 150° F and 165° F is required by Oregon Health Department with a maximum 165° F to 194° F.
- Minimum chemical sanitation hot water temperature between 120° F.

**Citation: OAR 333-150- Chapter 4 Equipment, Utensils, and Linens. Subpart 5 Maintenance and Operation. Section 501 Equipment. Subsection 110. Mechanical Warewashing Equipment, Wash Solution Temperature.**

(A) The temperature of the wash solution in spray type warewashers that use hot water to sanitize may not be less than:

- (1) For a stationary rack, single temperature machine, 74°C (165°F);Pf
- (2) For a stationary rack, dual temperature machine, 66°C (150°F); Pf
- (3) For a single tank, conveyor, dual temperature machine, 71°C (160°F);Pf or
- (4) For a multitank, conveyor, multi temperature machine, 66°C (150°F).Pf

(B) The temperature of the wash solution in spray-type warewashers that use chemicals to sanitize may not be less than 49°C (120°F).

**Authority Having Jurisdiction (AHJ): Oregon Plumbing Specialty Code**

**Citation: Chapter 8: Indirect Wastes**

**810.1 High Temperature Discharge.** No steam pipe shall be directly connected to a plumbing or drainage system, nor shall water having a temperature above 140° F (60° C) be discharged under pressure directly into a drainage system. Pipes from boilers shall discharge by means of indirect waste piping, as determined by the Building Official or the boiler manufacturer's recommendations. Such pipes shall be permitted to be indirectly connected by discharge into an open or closed condenser or an intercepting sump of an approved type that will prevent the entrance of steam or such water under pressure into the drainage system. Closed condensers or sumps shall be provided with a vent that shall be taken off the top and extended separately, full size above the roof. Condensers and sumps shall be properly trapped at the outlet with a deep seal trap extending to within 6 inches (152 mm) of the bottom of the tank. The top of the deep seal trap shall have a ¾ of an inch (19.1 mm) opening located at the highest point of the trap to serve as a siphon breaker. Outlets shall be taken off from the side in such a manner as to allow a waterline to be maintained that will permanently occupy not less than one-half the capacity of the condenser or sump. Inlets shall enter above the waterline. Wearing plates or baffles shall be installed in the tank to protect the shell. The sizes of the blowoff line inlet, the water outlets and the vent shall be as shown in Table 810.1. The contents of condensers receiving steam or hot water under pressure shall pass through an open sump before entering the drainage system.

**Advisory:** Do not assume that a dishwasher uses water hotter than 140-degrees. Most small establishments use chemical sanitation rather than hot water sanitation type dishwashers because they are cheaper to operate.

- Commercial dishwasher using chemical sanitation typically discharges 100-degrees F (though according to OAR it would discharge no less than 120-degrees F)
- Commercial dishwasher using hot water sanitation typically discharges 180-degree F

**Citation:** Alliance for Water Efficiency, Introduction to Commercial Dishwashers

**Advisory:** Water entering a grease trap should not exceed 140° F. According to several sources, FOG will congeal in the grease trap at 140-degrees or less. If water is hotter than 140°, FOG melts, emulsifies and enters the POTW.

**Citations** for the melting point of FOG were too numerous to list.

**Discussion:** The Dalles Municipal Code 4.12 Pretreatment prohibits the use of hot water if used for the purpose of causing the contents of an interceptor to be discharged into the sanitary system or to avoid the installation of an interceptor. But according to my reading of our authority, we do not have authority to make a requirement or conduct enforcement around a specific temperature of water entering the grease trap in the course of normal operations due to the location approved by the (OPSC) Building Official. However, this provision does provide enabling authority to the grease trap inspector to measure the temperature of the discharge in the grease trap as a part of normal inspection procedures.

Per a discussion with Plumbing Program Chief, Andy Skinner on April 19, 2018 (and an update conversation in late May), the plumbing code includes provision that water having a temperature above 140° F (60° C) shall not be discharged into the drainage system when the discharge under pressure. This section of the OPSC has been in place since the 1980's. However, the interceptor section of the code was changed in the 2014 version of the Oregon Plumbing Specialty Code to require dishwashers to discharge into a grease interceptor. In cases where a hot water dishwasher installed such that the water cools below 140° before entering the drainage system.

The Oregon Plumbing Specialty Code is not a retrofit code. Existing systems do not have to be updated to current code per section 102.2 2017 OPSC, for use or repair, and Section 102.3 only requires the addition, alteration, or renovation portion of a plumbing system to meet current code requirements. Therefore, neither the Pretreatment Program Coordinator nor the Building Official has authority to require that plumbing systems built and signed off under previous versions of the OPSC be retrofitted to current code.

Enforcement of the OPSC temperature limitation is not within the jurisdiction of the Pretreatment Program if such discharge enters the facility plumbing but does not interfere with the POTW. However, it is recommended that the grease trap inspector provide education to the customer about potential harm to their sewer piping due to the temperature of water entering the grease trap. We can also advise them of the enforcement consequences of allowing the hot water to carry FOG into the sewer system.

If (when) interference of the POTW occurs due to discharge of water exceeding 140° F in the course of normal operation, enforcement action is within the jurisdiction of the Pretreatment Program. Enforcement actions may include a requirement to consult a plumber to mitigate hot water discharge. Any number of mitigation measures may be employed to fit each unique situation. Such an enforcement provision must:

- Refer the FSE to a plumber, not the Building Official. The Building Official's enforcement jurisdiction will begin when the permit is issued and end when permit approval is signed.



- Could include a requirement to give contact information to the Pretreatment Program Coordinator for plumber the FSE is consulting.
- Should include a requirement to submit a copy of the signed permit to the Pretreatment Program Coordinator.
- When a copy of the signed permit is received, the grease trap inspector and/or Pretreatment Program Coordinator should conduct a follow-up inspection before closing the enforcement action.

**Citations for jurisdiction: Oregon Plumbing Specialty Code**

**Authority Having Jurisdiction (AHJ):**

**County Public Health Inspector:** The North Central Public Health has inspection authority for restaurants and some food trucks.

**State Oregon Department of Agriculture (ODA) Inspector:** The Oregon Department of Agriculture has inspection authority for retail food establishments, food storage warehouses, domestic kitchen food processor, slaughter facilities, non-slaughter meat processing facilities, and package meat sellers, bakeries, food processing establishments, cannabis food processing facilities, cannabis retail food establishments, and egg handlers. (per a conversation with ODA ODA Food Safety Specialist Naaman Smith on October 12, 2018 and reference the ODA website <http://oda.state.or.us/dbs/licenses/search.lasso?&division=fsd> )

The original memo only included information from the OAR authorizing County health inspectors. Since that time I have learned that the Oregon Department of Agriculture has identical language in OAR 603-205-0030 4.501.18 that grants this agency jurisdiction regarding grease traps.

**5-402.12 Grease Trap.**

If used, a grease trap shall be located to be easily accessible for cleaning.

**Discussion:** Per a discussion with Environmental Health Specialist Supervisor, John Zalaznik, on April 19, 2018 the public health official only determines that the grease trap is accessible for cleaning but does not check that it is cleaned. Grease trap cleaning inspections and enforcement is the responsibility of the City of The Dalles Pretreatment Program.

As of June of 2018 restaurant inspection records are posted online at this internet location [ncphd.org/records-licensing/environmental-health-food/food-restaurants](http://ncphd.org/records-licensing/environmental-health-food/food-restaurants)

Restaurants are inspected every six months. Inspection results are posted within two weeks of inspection.

The City of The Dalles grease trap inspector should immediately report the facility name and address to the Regulatory Compliance Manager for any inspection that discovers a grease trap is causing sewage to back up into the facility. This condition is a public health priority violation and the public health department or Oregon Department of Agriculture will respond within 24 hours.

The Regulator Compliance Manager will immediately forward such grease trap inspection findings to John Zalaznik by e-mail and follow up with a phone call.

During the call Mr. Zalaznik suggested that another public health and safety partnership would be the local Fire Marshal in regard to kitchen exhaust cleaning. Upon researching the process for kitchen exhaust cleaning, I learned that hot water pressure washing and degreasing chemicals are used for such cleaning. When properly cleaned the wastewater is collected in recycling barrels. When improperly cleaned the wastewater is directed into facility drains with or without a grease trap. I recommend development of an education flyer about proper disposal of kitchen exhaust cleaning waste in partnership with the local fire department. The grease trap inspector can distribute the flyer and the fire marshal may agree to distribute the flyer as well.

### **Authority Having Jurisdiction (AHJ): Oregon Plumbing Specialty Code**

Recall, the Oregon Plumbing Specialty Code specifically prohibits the plumbing inspector from bringing existing plumbing that was approved under an earlier version of code to the standards of current code with a very narrow exception.

#### **Citation: Chapter 1: Administration**

**102.2 Existing Installations.** Plumbing system lawfully in existence at the time of the adoption of this code shall be permitted to have their use or repair continued where the use or repair is in accordance with the original design and location and no hazard to life, health or property has been created by such a plumbing system.

**102.3 Additions, Alterations, Renovations, or Repairs.** Additions, alterations, renovations or repairs shall conform to that required for a new system without requiring that the existing plumbing system to be in accordance with the requirements of this code. Additions, alterations, renovations, or repairs shall not cause an existing system to become unsafe, insanitary, or overloaded.

### **Authority Having Jurisdiction (AHJ): County Public Health Inspector**

However, the Oregon Health Authority Food Sanitation Rules allow the public health inspector require a food service establishment to replace equipment or bring it up to current code under certain conditions.

#### **Citation: OAR 333-150- Chapter 8 Code Applicability. Subpart 3 Permit to Operate. Section 304 Conditions of Retention. Subsection 11 Responsibilities of the Permit Holder.**

(G) Replace existing facilities and equipment specified in § 8-101.10 with facilities and equipment that comply with this [Food Sanitation] Code if:

- (1) The regulatory authority directs the replacement because the facilities and equipment constitute a public health hazard or nuisance or no longer comply with the criteria upon which the facilities and equipment were accepted,

(2) The regulatory authority directs the replacement to meet current code requirements after the food establishment has been closed for a minimum of six consecutive months

**Authority Having Jurisdiction (AHJ): City of The Dalles**

**THE DALLES MUNICIPAL CODE 4.12 PRETREATMENT. Adopted January 16, 2017.  
Reformatted to enhance readability.**

B. Additional Pretreatment Measures.

3. All new restaurants and industrial users employing a fats, oils, and/or grease (FOG) process shall install an approved FOG pretreatment device (interceptor) to pretreat process wastewater before discharging to the POTW.
  - In the case of other users, including preexisting restaurants and industrial users, interceptors shall be installed when, in the opinion of the control authority, they are necessary for the proper handling of wastewater containing excessive amounts of FOG, or sand; except that such interceptors shall not be required for residential users.
  - All interceptors shall be of type and capacity approved by the control authority, shall comply with the Oregon Plumbing Specialty Code, and shall be so located to be easily accessible for cleaning and inspection

**[Discussion:** It must be noted that the type, capacity and location of a grease trap within a facility is the decision of the Building Official and not within the Pretreatment Program jurisdiction. If the installation were to comply with plumbing code the grease trap would be installed placed as close as practical to the fixtures they serve and thus out of the Pretreatment Program jurisdiction regarding type and capacity.

However, the Pretreatment Program jurisdiction is similar to the Cross Connection Program jurisdiction in that the protective equipment installed inside the building is under the jurisdiction of the Oregon Plumbing Specialty Code, not the utility. In the Cross Connection Program the utility has the authority to require premise isolation if the plumbing code required equipment is not properly tested and/or maintained. Therefore, I propose that the Pretreatment Program enabling authority provide for requiring a premise isolation grease trap located at the discharge point to be installed at the User's expense if the plumbing code required grease trap is not properly maintained. This would make the enabling authority enforceable within the Pretreatment Program jurisdiction. Generally, the expense of premise isolation equipment convinces the User to install and/or maintain protective equipment properly.]

- Such interceptors shall be inspected, cleaned, and maintained regularly, as needed, by the User at the User's expense.

**[Discussion:** Note that this statement begins with the word "Such...", which refers to the previous statement about equipment that is out of the jurisdiction of the Pretreatment Program. It would be preferable to begin this statement with these words, "User-owned..." so that the maintenance of the protective equipment is for

all grease traps installed within or outside of direct Pretreatment Program jurisdiction.

The Oregon Plumbing Specialty Code (OPSC) is an installation code, not a maintenance code. Therefore, the OPSC does not include testing, inspection, cleaning or repair requirements. Some years ago the Plumbing Program Chief ruled that the water utility has jurisdiction for requiring testing and repair of plumbing code required backflow prevention assemblies since the plumbing code is not a maintenance code and it is desirable for those assemblies to be tested to protect public health. I believe the Pretreatment Program might expect a similar ruling if there is a kerfuffle about the Pretreatment Program maintenance requirements.]

- Cleaning the interceptor shall include removal of all contents, including floating materials, wastewater, bottom sludge and solids, and pressure washing or scraping of all accumulated grease from walls and baffles.
- All cleaning residues shall be satisfactorily disposed of in an approved environmentally acceptable manner. FOG removed from interceptors shall not be disposed of in the sanitary or storm sewer.
- Decanting or discharging of removed waste back into the interceptor from which it was removed for the purpose of reducing the volume to be disposed is prohibited.
- The use of hot water, enzymes, bacteria, chemicals or other agents or devices for the purpose of causing the contents of an interceptor to be discharged into the sanitary system or to avoid the installation of an interceptor is prohibited.

**[Discussion:** This statement stays within our jurisdiction because it pertains to using these methods to move FOG into the POTW. The Pretreatment Program does not have jurisdiction if hot water is discharged into a grease trap due to normal operations into plumbing code required locations. However, it is in the User's interest to be educated about the impact on their building plumbing if hot water discharged into a grease trap. The Pretreatment Program can educate, but not enforce this clause unless these methods are used for cleaning the trap.]

- Employees, authorized by the Control Authority, shall be allowed access to interceptors for the purpose of inspection and/or to verify compliance with this section.

**[Discussion:** A mature interceptor inspection program may authorize self-inspection by facility owners or employees. Program materials for such a program are available on the San Antonio Water System website.]

## **RESOLUTION NO. 13-022**

### **A RESOLUTION ADOPTING LOCAL LIMITS FOR DISCHARGE TO THE CITY WASTEWATER SYSTEM**

Section 1. That the following technically-based local limits be established to govern all discharges to the City wastewater system:

PARAMETER	LIMIT
Arsenic	0.11 mg/L
Cadmium	0.09 mg/L
Copper	2.15 mg/L
Cyanide	0.33 mg/L
Lead	0.09 mg/L
Mercury	0.027 mg/L
Nickel	0.79 mg/L
Selenium	0.50 mg/L
Silver	1.18 mg/L
Zinc	4.5 mg/L
Fats, Oil, & Grease	100 mg/L
pH	6.0- 9.0
Temperature	104° F At entrance to plant 150° F Discharge to collection system
Flammability	9 minutes/day at 5% LEL, and no reading of 10% LEL allowed

Section 2. This Resolution shall become effective June 24, 2013.

**Discussion:** The local limits exceed 140° F, which would allow hot water to carry FOG into the POTW if present in the wastestream. If we reduce the temperature limit to 140° F we would not only protect the POTW but we would have a better foundation for educating grease trap owners about the importance of keeping hot water from carrying FOG into their building pipes. If a permitted industry needed to exceed the 140° F, it is my understanding that an industry limit could be included in the permit provided that there was documentation that no harm to the POTW would occur.

I talked with Rick Wolf about the significance of the mg/L limit on FOG and he said that the amount of FOG allowed would not be visible and does not pertain to Users with grease traps. The FOG local limit was included to ensure that the City could require a permitted industry to test.