



**FUSS & O'NEILL**  
*Disciplines to Deliver*

# Outreach Training Fats, Oils, and Grease



Vanessa Landolina  
Fuss & O'Neill  
(860) 646-2469

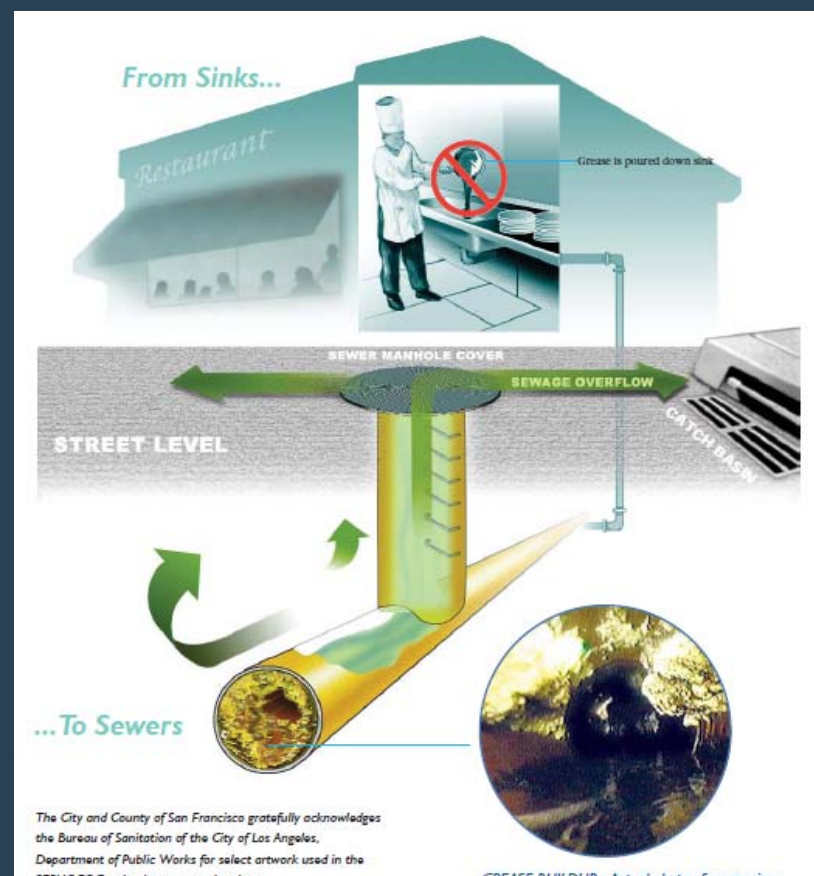
# Agenda

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- Authorization Under This General Permit
- Conditions of This General Permit
- Outreach Materials
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- New Haven Presentation
- Review
- Questions



# Background

- Uncontrolled and/or inadequately controlled discharges of Fats, Oils, and Grease (FOG) into municipal sanitary sewage systems has caused a significant number of raw sewage overflows resulting in public health risks and negative impacts to waterways
- The US Environmental Protection Agency (EPA) developed two rules to address this problem.
  - The SSO Rule (Sanitary sewer overflow)
  - CMOM Rule (Capacity, management operations and maintenance of sewers)
- Both of these rules require municipalities to control FOG



# Background



## The Department of Environmental Protection (DEP) Approach

- In 1998 DEP initiated an effort to minimize or eliminate sewage overflows caused by FOG blockages
- In 2005 in order to help address continuing FOG problems, the DEP issued the “General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments” (General Permit)
- This statewide general permit is a useful tool to assist all 130 municipalities with sanitary sewers with EPA compliance requirements

# Background



- How much do municipalities spend in maintaining and cleaning collection systems?
  - *Medium sized municipality under consent order spends 110,000 per year. Of that 10% is just for cleaning blockages caused by grease*
  - *Medium sized municipality who has not implemented the FOG program spends 180,000 per year*
- The discharge of fats, oils, and grease from certain food preparation establishments creates significant environmental and public health problems:
  - *Raw sewage overflows into rivers and streams result in water quality violations and serious health risks to people coming into contact with the water*
  - *Raw sewage overflows into residential homes and commercial establishments results in, business closure, expensive cleaning and repairs and serious health risks*

# Outreach Program

- Share information regarding FPE assessments performed earlier
- Assist Municipalities with their regulatory obligations
- Provide information that can be distributed to FPEs for compliance assistance

## FPE Compliance Survey Summary Report

Connecticut Department of  
Environmental Protection  
Hartford, Connecticut

December 2009



146 Hartford Road  
Manchester, CT 06040

Project No. 20070385.A30

# Outreach Program



## Free Environmental Compliance Assistance

Did you know roughly 70% of sewer blockages and resulting overflows are caused by build-up of fats, oils & greases?

The Connecticut Department of Environmental Protection (CT DEP) is developing a compliance assistance program for food preparation establishments (FPEs). The purpose of this outreach is to help Connecticut's FPEs understand environmental requirements and ways to prevent pollution. Our consultant, Fuss & O'Neill, Inc., will be facilitating the program. Please spend a few moments to complete this survey and mail, email or fax it back to the address listed below. Your participation in the development of this compliance assistance program is important and valuable. All responses will be kept anonymous by our consultant, so please be honest when completing this form.

Fuss & O'Neill is also offering up to 20 free assessments of fats, oils and greases management. If interested, please mark the box provided at the end of the survey and be sure to complete the contact information. We encourage you to take advantage of this free, no risk opportunity.

To have this survey translated into Spanish  
Para la traducción de esta encuesta (cuestionario) al español, favor de comunicarse con Adam Barbash a [ABarbash@fando.com](mailto:ABarbash@fando.com)

To have this survey translated into Chinese  
要将此调查翻译成中文, 请与 Adam Barbash ([ABarbash@fando.com](mailto:ABarbash@fando.com)) 联络

To have this survey translated into Japanese  
この調査の日本語訳については、Adam Barbash ([ABarbash@fando.com](mailto:ABarbash@fando.com)) までご連絡ください

### Survey Questions

1. When did your facility begin operations? (Month, Day, Year) \_\_\_\_\_
2. What type of FPE do you maintain (i.e. restaurant, church kitchen, school cafeteria, etc.)? \_\_\_\_\_
3. Are you familiar with the CT DEP's General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments? YES / NO
4. Does your facility produce wastewaters that may contain fats, oils and/or greases? YES / NO  
Examples: Wastewaters, wastes and wash waters created from:
  - Washing dishes, kitchen floors, deep fryers, wok stations, ventilation hoods, etc.
  - Draining liquids from raw or processed foods and/or byproducts**IF NO**, skip to Question 5, otherwise continue
- 4a. Are any of these wastewaters discharged to a sanitary sewer? YES / NO  
**IF NO**, skip to Question 5, otherwise continue
- 4b. Does your facility use a grease trap/interceptor or other type of fat, oil and grease recovery unit? **IF YES**, continue, **IF NO**, skip to Question 5.
- 4c. How much of your wastewaters that may contain fats, oils and greases drain to this unit? (Check **ONE**)
  - All
  - Some
  - None
  - Not sure

## December 2009

— 4,037 FPEs were mailed surveys:

- Are you familiar with the General Permit
- Do you generate wastewater containing FOG
- How do you manage wastewater
- How do you manage FOG
- Are you interested in a free assessment of FOG management practices

# Outreach Program

- Fuss & O'Neill performed free assessments at 15 FPEs, the following topics were investigated:
  - *Best Management Practices for FOG*
  - *Use of Automatic Grease Recovery Units (AGRUs) and Oil Water Separators*
  - *Mechanical design of AGRUs and Oil Water Separators*





# Outreach Program



- Findings:
  - *Of the 15 FPEs assessed, 3 used functional AGRUs, the remainder used a Grease Trap*
  - *Of the 15 FPEs assessed, 13 performed some type of inspection, most did not keep inspection logs*
  - *Lack of understanding or knowledge of regulatory requirements of the General Permit*
  - *Proper maintenance and inspections were not being performed*

# Overview

- The General Permit regulates the discharge of wastewaters from Class III or Class IV food preparation establishments (FPE) that discharge to a sanitary sewer

Class III & Class IV

Factory Cafeteria

Bakery

Restaurants

Hotels

Hospital Kitchens

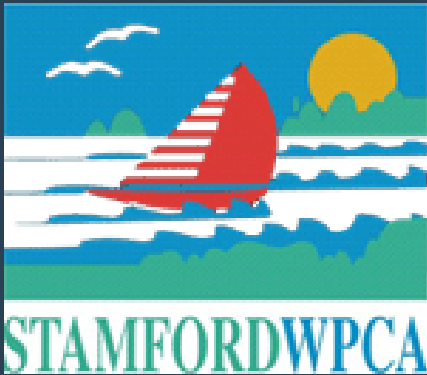
School Kitchens

Bars

Church Kitchens

Cafe

# Overview



- General Permit does not require that FPEs register with the DEP
- FPE will work directly with an authorized agent of the municipality in which the FPE is located
- Authorized Agents can include
  - *Water Pollution Control Authority (WPCA)*
  - *A designee from the WPCA such as*
    - *Building officials*
    - *Health Department workers*
    - *Public Works Department member*
    - *Company contracted to oversee the FOG program*

# Overview

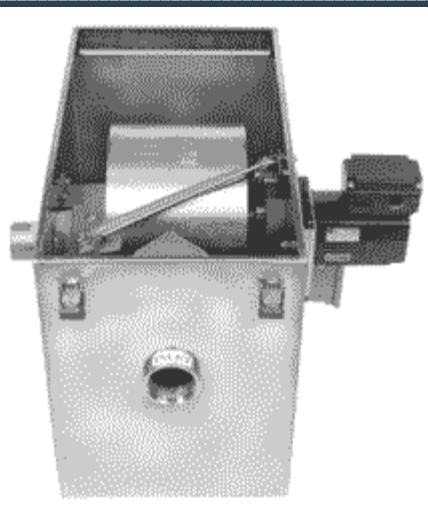
## Public and Private Entities Involved in FOG Pretreatment Program Implementation

Name	Potential Role in Program Implementation	Scope
Connecticut Department of Environmental Protection (DEP)	Issuance of the <i>General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments</i> . Enforcement action against non-complying FPEs.	Statewide
Connecticut Department of Consumer Protection (DCP)	Licensing of commercial facilities that may be FPEs under the <i>General Permit</i> definition.	Statewide
Municipal Government Departments (Public Works or Engineering)	Updating Sewer Use Ordinances to incorporate FOG management requirements consistent with the <i>General Permit</i> , conducting inspections, and FOG program registration reviews and approvals.	Local
Pollution Control Authorities (if separate from Municipal Government Departments)	Updating applicable regulations and/or ordinances to incorporate FOG management requirements consistent with the <i>General Permit</i> ; review and approve FOG program registration applications. Conduct inspections.	Regional and local
Building Inspectors (report to Connecticut Department of Public Safety)	Provide information concerning requirement of the <i>General Permit</i> . Incorporate FOG management requirements in inspection procedures for newly established and renovated FPEs.	Local
Food Preparation Establishments (FPEs) as defined in the <i>General Permit</i>	Installation, operation, maintenance, inspection and record-keeping for grease pretreatment equipment required by the <i>General Permit</i> and by other applicable ordinances.	Statewide
Grease Trap/Interceptor Cleaning Companies	Servicing of pretreatment equipment, collection of non-renderable FOG, transport, disposal of wastes and recyclable materials.	Statewide
Renderers	Provide collection of renderable grease.	Statewide
Grease Interceptor Installers	Provide sizing and installation of grease interceptors.	Regional and local
Manufacturers of AGRUs	Provide sizing and installation of AGRUs.	Statewide

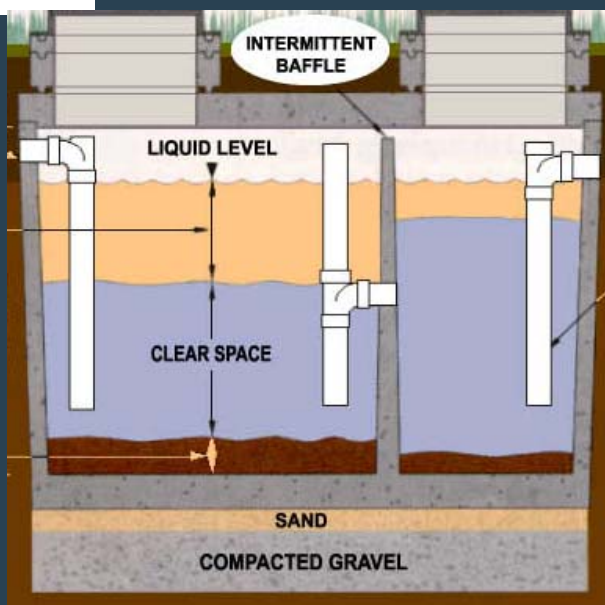
# Overview

- Any new FPE initiating a discharge after September 30, 2005 will comply immediately
- Any FPE discharging prior to September 30, 2005 needs to comply no later than July 1, 2011
- There are exceptions...

# Overview




- FPEs are required to install one of the following:
  - 1,000 gal (minimum) outside grease interceptor
  - Automatic grease recovery unit (AGRU)
  - Other device to be approved by the authorized agent
- The unit to install will be determined by the FPE and authorized agent



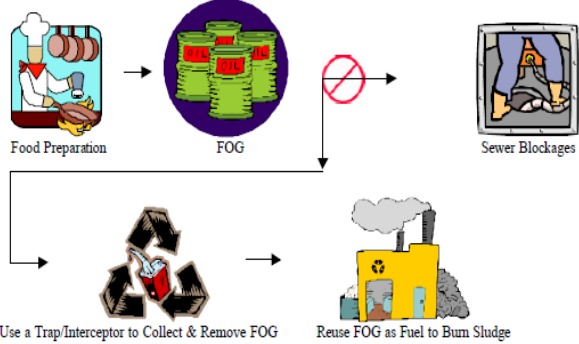
# Overview

- This General Permit was issued under the authority of Section 22a-430b of the Connecticut General Statutes
  - *All wastewater discharges in CT must be permitted*
- DEP may issue General Permits for certain discharges – FOG is one of them



STATE OF CONNECTICUT  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATER MANAGEMENT  
PLANNING & STANDARDS DIVISION  
860-424-3704

**General Permit for the Discharge of Wastewater  
Associated With Food Preparation Establishments**



Food Preparation → FOG → Sewer Blockages

Use a Trap/Interceptor to Collect & Remove FOG → Reuse FOG as Fuel to Burn Sludge

Issuance Date: September 30, 2005

# Definitions

- **Authorized Agent** – Means the water pollution control authority or its designee.
  - *In municipalities where no WPCA exists, the authorized agent will be the local building official*



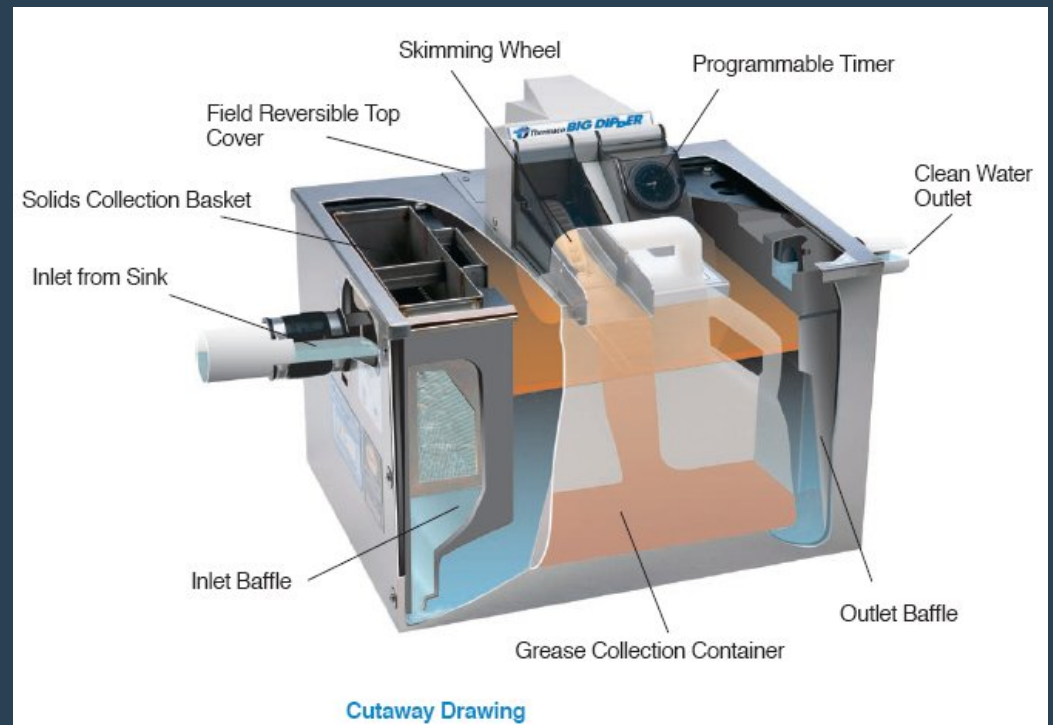


# Definitions

- **Authorized Agent – What can they do?**
  - *Designate any area of the sewer system as a problem area*
  - *Approve piping materials other than what is in the General Permit*
  - *Approve additional fixtures to be connected to treatment units*
  - *Notify or determine if testing is required to be completed by the FPE*
  - *Approve additional treatment units other than what is in the General Permit*
  - *Review the need for cleaning schedules*
  - *Issue NOV, fines, and close down restaurants*

# Definitions

- **Automatic Grease Recovery Unit (AGRU)** - means an interior grease interceptor that separates grease from the wastewater by active, mechanical, or electrical means



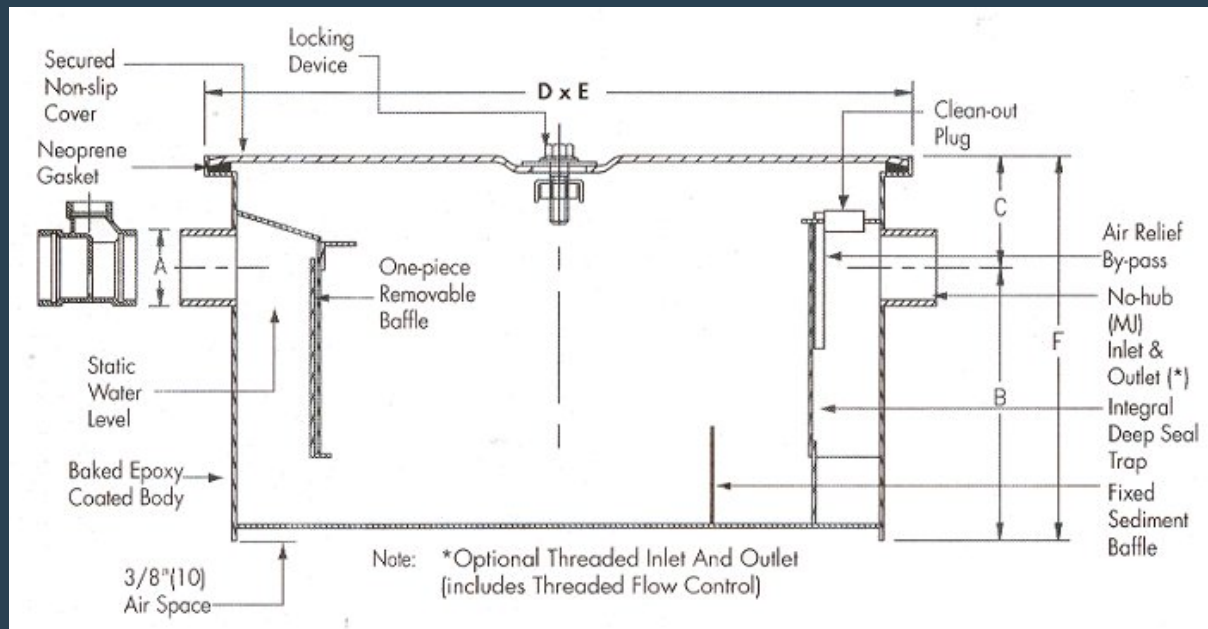
# Definitions



- **Food Preparation Establishments (FPE)** –Class III and IV FPE or any facility discharging fats, oils, and grease above the effluent limits
  - *Class III* - a food service establishment having on the premises exposed potentially hazardous foods that are prepared by hot processes and consumed by the public within 4 hours of preparation.
  - *Class IV* - a food service establishment having on the premises exposed potentially hazardous foods that are prepared by hot processes and held for more than 4 hours prior to consumption by the public.

# Definitions

- **Grease Interceptor** – Means any device or equipment designed to separate fats, oils, and grease from wastewater while allowing water to flow through. Installed in accordance with 2003 International Plumbing Code



# Authorization Under This General Permit



- **Eligible Activities** - Any wastewater discharge associated with a facility which discharges to a sanitary sewer line and then to a POTW or a privately or State owned sewage treatment works
- **Effective Date & Expiration Date of General Permit**
  - *Effective on the date it is issued by the commissioner*
    - *September 30, 2005*
  - *Expires ten years from date of issuance*

# Authorization Under This General Permit

- **Requirements for Authorization**
  - *The General Permit authorizes the discharge of FOG provided the following*
    - *Grease interceptor, AGRU, or approved units are installed in accordance with local ordinances and the 2003 International Plumbing Code*
    - *Coastal area management – Will not cause adverse impacts to coastal resources*
    - *Endangered and threatened species - continued existence is not impacted*
- **No registration required**



# Conditions of the General Permit

- **Compliance Schedule**

FPE will comply with the following schedule

- *Discharge began after September 30, 2005 (New FPE)*
  - *Comply with all conditions of General Permit before discharging*
- *Discharge begins before September 30, 2005*
  - *Comply with all conditions of General Permit by July 1, 2011*
- *Exceptions...*

# Conditions of the General Permit

- **Exceptions**

- *Change in ownership*

- *Comply with all conditions of the General Permit within 60 days of change of ownership*

- *Renovation of facility*

- *Comply with all conditions of General Permit as part of the renovation*

- *Problem areas of the sewer system (excessive FOG)*

- *Requires notification from the authorized agent and will be resolved within a “reasonable time” scheduled by the agent*



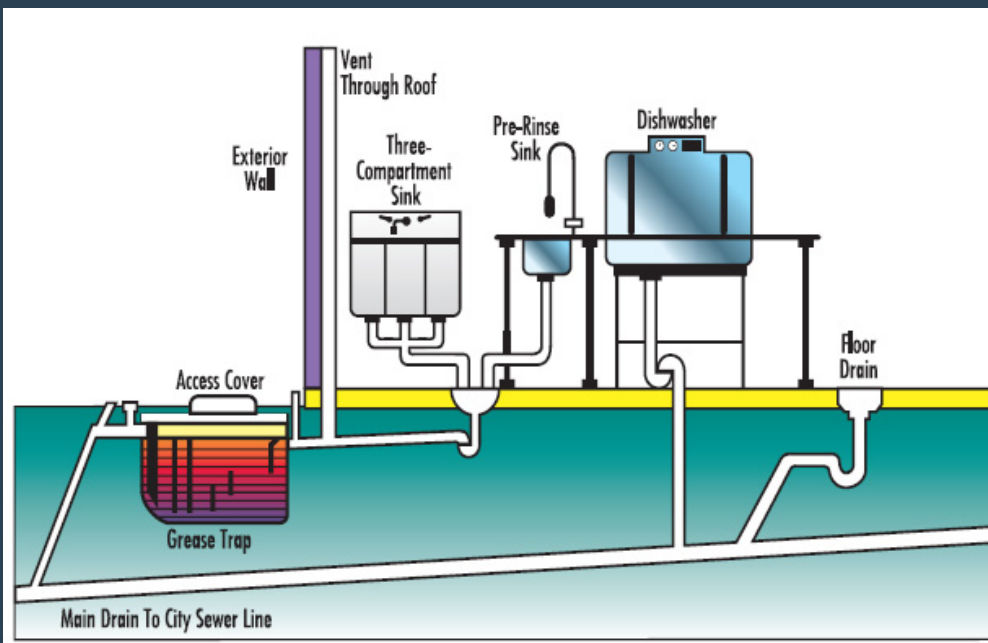


# Conditions of the General Permit

- **Outdoor In-Ground Grease Interceptor**

- *Unit will be installed on a separate building sewer line for kitchen flows. Fixtures connected to these flows are:*

- *Pot sinks*
- *Pre – rinse sinks*
- *Any sink into which FOG is likely to be introduced*
- *Soup kettles or similar devices*
- *Wok stations*
- *Floor drains or sinks into which kettles may be drained*
- *Automatic hood wash units*
- *Dishwashers without pre-rinse sinks*
- *Any other fixture or drain that is likely to allow FOG to be discharged*
- *Sanitary sewage not allowed*



# Conditions of the General Permit

- **Outdoor In-Ground Grease Interceptor**
  - *Unit will have a minimum depth of 4 ft and minimum volume:*
    - *Equivalent to the maximum daily flow over a 24 hour period from all fixtures connected to the grease interceptor based on water meter records or other methods of calculation as approved by the authorized agent, or*
    - *1,000 gallons, whichever is greater*



# Conditions of the General Permit



- **Outdoor In-Ground Grease Interceptor**
  - *Constructed of water tight concrete or other material*
  - *Located in accessible area*
  - *No temporary or permanent structures will be placed over the unit*
  - *When installed in high traffic areas, must be designed to accommodate traffic loading*

# Conditions of the General Permit

- **Outdoor In-Ground Grease Interceptor**

- *If constructed of concrete:*

- *Minimum of 4,000 psi per ASTM standards with 4% - 7% air entrainment*
- *Minimum liquid depth will be 36 inches*
- *Air space between liquid height and tank top should be 8 inches*

*\*Also refer to Chapter 10 of the Resource Document for more information\**

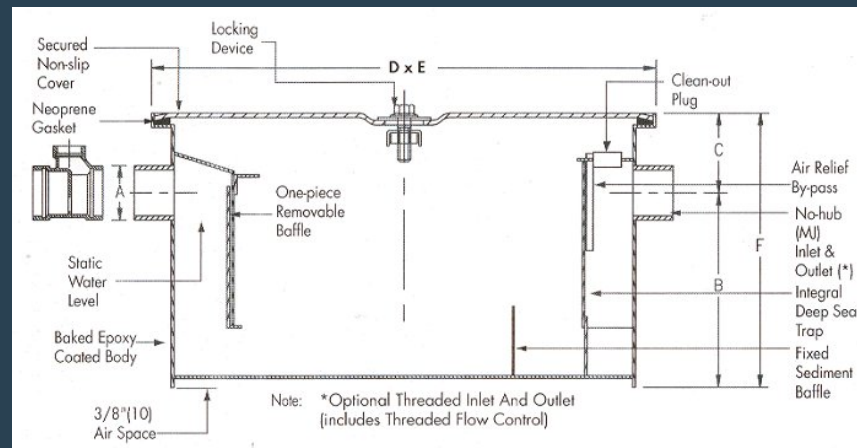


# Conditions of the General Permit

- **Outdoor In-Ground Grease Interceptor**

- *If constructed of concrete:*

- *Seams, and holes will be grouted with waterproof sealant*
- *If seasonal high groundwater is at an elevation greater than the bottom of the unit, but below the top, sides, and bottom will be coated with waterproof sealant*
- *If seasonal high groundwater is greater than the top of the unit the exterior and extensions will be coated with waterproof sealant*
- *Invert elevation of inlet will be between 3 inches and 6 inches above the invert elevation of the outlet*



# Conditions of the General Permit



- **Outdoor In-Ground Grease Interceptor**
  - *Separate cleanout covers over inlet & outlet*
  - *Cleanout ports will be fitted with manhole extensions*
  - *If high traffic areas, extensions will weigh a minimum of 59 lbs or contain a locking mechanism*
  - *Manholes, extensions, inlet, outlet will have a minimum diameter of 17 inches*

# Conditions of the General Permit

- **Outdoor In-Ground Grease Interceptor**
  - *Inlet, outlet piping specification – PVC ASTM 1785 Schedule 40*
  - *Joints specifications ASTM D 3212*
  - *Minimum diameter inlet and outlet piping will be 4 inches*
  - *Inlet and Outlet will use a tee-pipe and will extend within 12 inches of the bottom and at least 5 inches above the static liquid level of the tank*



# Conditions of the General Permit



- **Outdoor In-Ground Grease Interceptor**
  - *Set level on stable base*
  - *Outlet discharge pipe will be directly connected to sanitary sewer*
  - *Minimum separation distances will be maintained between the unit and such things as the building, watercourse, and drains*
    - *This will be listed in local municipal ordinances*



# Conditions of the General Permit

- Outdoor In-Ground Grease Interceptor

- *If testing is required, the testing will be performed in either of the following manners:*

- *Vacuum Test*
    - *Water Pressure Test*

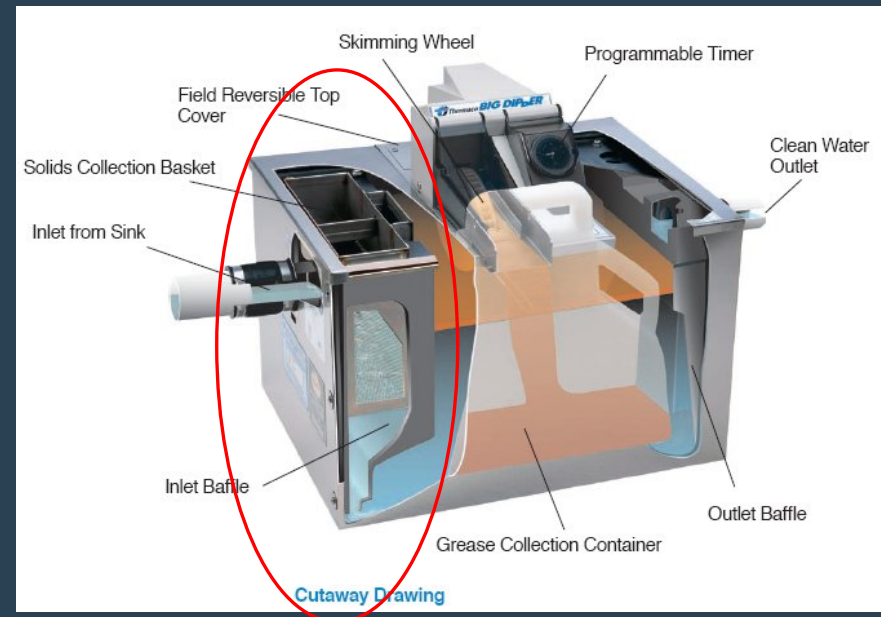


# Conditions of the General Permit

- **Automatic Grease Recovery Unit (AGRU)**
  - *Installed downstream of fixtures*
  - *Sized to properly pre-treat flows for all connected fixtures*
  - *Constructed of corrosion-resistant material, stainless steel, or plastic*
  - *Sept. 2006 memo from Bill Hogan states:*
    - *AGRUs shall be certified by a recognized third party testing agency for conformance to ASME/ANSI Standards A112.14.3 and A112.144*
    - *The AGRU and its electrical components shall be certified by recognized third party testing agency for conformance to applicable UL/ANSI electrical safety standards*
  - *The DEP Resource Documents provides information on sizing criteria for equipment*

# Conditions of the General Permit

- **Automatic Grease Recovery Unit (AGRU)**
  - *Solids will be intercepted and separated from effluent using a strainer*
  - *Unit will operate using a skimming device, automatic draw-off, or other mechanical means to remove FOG*
  - *Automatic skimming device will be hard wired or cord and plug and controlled using a timer or level control*
  - *Automatic skimming device will be field adjustable and will operate no less than once per day*



# Conditions of the General Permit

- **Automatic Grease Recovery Unit (AGRU)**



- *Fitted with internal or external flow control device to prevent exceedance in manufacturer's recommended design flow*
- *Located to permit easy access*
- *Designed and installed in accordance with manufacturer's specifications*

# Conditions of the General Permit

- **Other Approved Unit**
  - *FPE may request the use of a unit other than a grease interceptor or AGRU*
  - *FPE must demonstrate that the other unit can reliably meet the effluent limitations established*
  - *FPE may install another approved unit only after having received written approval from the Authorized Agent*



# Conditions of the General Permit

- **Diminimus Discharges**
  - *FPE may request a waiver for the treatment requirements*
  - *FPE must prove limited potential for FOG in the discharge*
  - *Authorized agent will use their judgment to determine if an FPE is exempt from installation requirements. They will review the following:*
    - *Frequency of operation*
    - *Volume of flow*
    - *Potential for fats, oils, and grease based upon the menu*
  - *Examples of Class III and Class IV FPE that may be exempts from requirements:*
    - *Itinerant Vendors*
    - *Satellite Doughnut shops and Coffee Shops*
    - *Ice Cream Shops*
    - *Sandwich Shops*
    - *Catered Food Services*
    - *Check DEP Guidance Document for more information*



# Conditions of the General Permit

- **Effluent Limitations**

- *At no time will the pH of wastewater discharged from the units be less than 5 s.u. and greater than 10 s.u.*
- *At no time will the concentration of FOG in wastewater exceed 100 milligrams per liter*

- **Sampling**

- *Not required*



# Conditions of the General Permit

- **Pollution Prevention/BMP**
  - *No valve or bypass equipment*
  - *Renderable FOG will only be placed in separate storage containers*
  - *Inspections are required*





# Conditions of the General Permit

- **Pollution Prevention/BMP**
  - *Outdoor in-ground grease interceptor will be emptied by a grease interceptor cleaner when 25% of operating depths is occupied by FOG and settled solids or a minimum of once every 3 months*



# Conditions of the General Permit

- **Pollution Prevention/BMP**
  - *FPE may request a less frequent cleaning interval following a minimum of 1 year of operation based upon the results of inspections*
  - *FPE will maintain written log on-site of grease interceptor cleaning and maintenance*
  - *Copies will remain on site for at least 5 years*



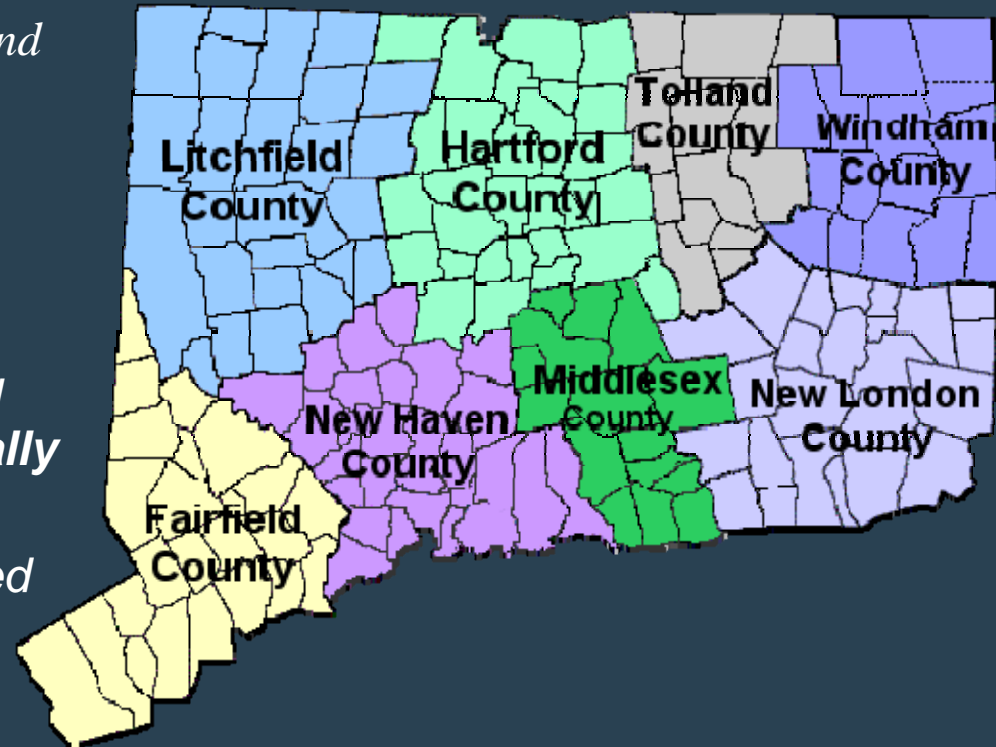
# Conditions of the General Permit

- **Pollution Prevention/BMP**
  - *Cleaning, servicing, removal, and hauling of FOG and food wastes requires that FPEs hire a grease interceptor cleaner or hauler*
  - *All AGRUs will be maintained in accordance with manufacturer's recommendations*
  - *Barrels should have an odor locking lid*



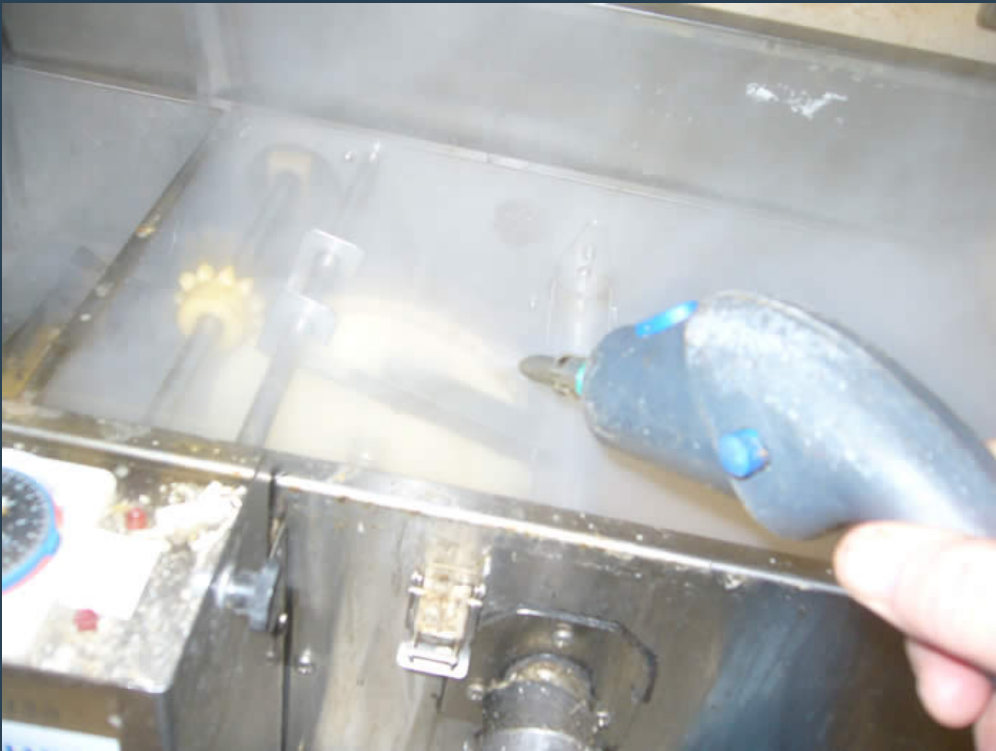
# Conditions of the General Permit

- **Pollution Prevention/BMP**
  - *CT - Disposal of contents of interceptors and AGRUs at a regional collection/transfer /disposal site*
    - *Frac Tanks – Torrington and Windham*
    - *Incinerators – New Haven, Waterbury, Hartford, Cromwell and Naugatuck*
  - *Outside CT – Disposal of contents of interceptors and AGRUs in an **environmentally accepted manner***
  - *All haulers should be licensed with and certified by the Department of Health*



# Conditions of the General Permit

- **Pollution Prevention/BMP**
  - *FPE can not use hot water, steam, chemicals, or biological additives if they are aware that it will cause a release of FOG*



# Conditions of the General Permit

- **Pollution Prevention/BMP**
  - *No food grinder or pulper will discharge to grease interceptors or AGRUs*
  - *All wastewater flows will be screened to prevent solids from entering treatment units*



# Conditions of the General Permit

- FPEs will maintain a written inspection log for each discharge
- FPEs must take steps to identify and correct any and all conditions that could potentially result in a violation of the General Permit and track them using a written log
- FPEs will immediately notify the POTW if analytical results indicate an exceedance of pH or FOG
- FPEs will maintain all records on site for a period of 5 years

**Record Keeping  
Requirements FPEs**

# Outreach Material

- **Compliance Surveys**
  - *After surveying FPEs the DEP & Fuss & O'Neill performed surveys of Municipalities in Connecticut*
    - *The objective was to determine what municipalities need to prepare and act as Authorized Agents and enforce the General Permit*






# Outreach Material

- **Municipality Surveys**

- *Electronic surveys were sent to every WPCF or WPCA across the state – 336 surveys in all*
- *64 surveys were returned*
- *25 questions were asked in total*
  - *Familiarity with General Permit*
  - *Enforcement of General Permit*
  - *FOG management practices*
  - *Need for educational materials*



**Environmental Compliance Assistance  
FOG Questionnaire**

The Connecticut Department of Environmental Protection (CT DEP) is developing a compliance assistance program for municipalities with food preparation establishments (FPEs) in sewer areas. The purpose of this outreach is to provide Connecticut's municipalities with the tools needed to assist FPEs in their jurisdiction comply with the General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments (General Permit). Our consultant, Fuss & O'Neill, Inc., will be facilitating the program. Please spend a few moments to complete this survey and mail, email or fax it back to the address listed below. If you have completed the online survey please disregard this questionnaire. Your participation in the development of this compliance assistance program is important and valuable. The results of this survey will be used to provide guidance to you, the municipalities, in promoting compliance with the General Permit.

**Survey Questions**

1. How familiar are you with the General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments (General Permit)?	Fully	Somewhat	Not at All
2. Based on your knowledge of the General Permit, are there any areas that are unclear or deficient? if so, please explain.	Comment:		Yes No
3. Do you have an established FOG management program?			Yes No
4. Does your municipality have ordinances relating to FOG compliance?			Yes No
5. Approximately how many FPEs in your jurisdiction are subject to the General Permit?			
6. Approximately how many of the FPEs in your jurisdiction are in compliance with the General Permit?	All	Some	None Unknown
7. What do you feel is the biggest challenge facing your municipality when establishing FPE compliance with the General Permit?			
8. How would you describe enforcement of the FOG program/General Permit in your municipality?	Fully Developed	Partially Developed	Not Developed
9. Approximately how often have the FPEs in your jurisdiction been inspected for compliance in 2009?			
10. Approximately how many citations have been issued to FPEs regarding FOG ordinance (if applicable) non-compliance?			
11. Do you feel that the FPEs who are required to comply with the General Permit and local ordinances (if applicable) will be receptive to doing so?			Yes No
12. Do you feel that the FPEs who are required to comply with the General Permit and local ordinances (if applicable) want assistance and educational materials?			Yes No
13. Are the majority of haulers being used to transport FOG based within your jurisdiction or Connecticut? if not, where are they based?			
14. Are the haulers asking the FPEs to separate yellow grease from other waste?			Yes No Unknown
15. How are the hauler or treatment facilities treating the FOG?			

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# Outreach Material

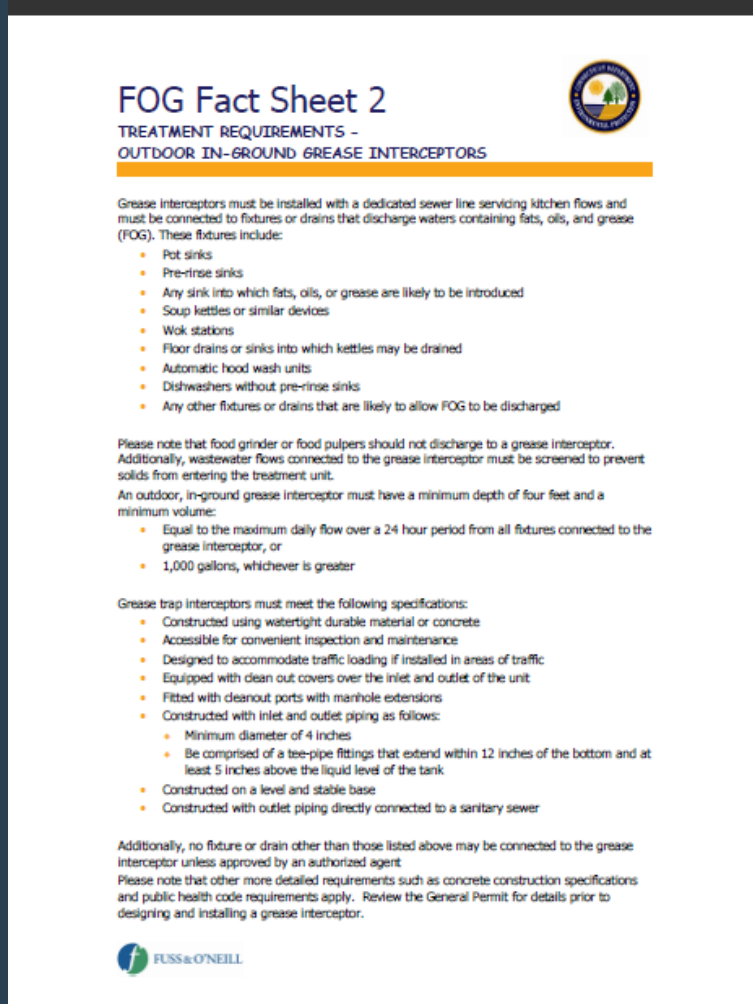
- **Results**

- *Most respondents were aware of the General Permit*
- *Some WPCFs/WPCAs have implemented a FOG program but many have not*
- *Nearly all respondents indicated they are prepared to act as an “authorized agent”*
  - *District Health Department will provide assistance*
  - *25% described program as fully developed*
  - *25% described program as not developed*





# Outreach Material



**FOG Fact Sheet 2**  
TREATMENT REQUIREMENTS -  
OUTDOOR IN-GROUND GREASE INTERCEPTORS

Grease interceptors must be installed with a dedicated sewer line servicing kitchen flows and must be connected to fixtures or drains that discharge waters containing fats, oils, and grease (FOG). These fixtures include:

- Pot sinks
- Pre-rinse sinks
- Any sink into which fats, oils, or grease are likely to be introduced
- Soup kettles or similar devices
- Wok stations
- Floor drains or sinks into which kettles may be drained
- Automatic hood wash units
- Dishwashers without pre-rinse sinks
- Any other fixtures or drains that are likely to allow FOG to be discharged

Please note that food grinder or food pulpers should not discharge to a grease interceptor. Additionally, wastewater flows connected to the grease interceptor must be screened to prevent solids from entering the treatment unit.

An outdoor, in-ground grease interceptor must have a minimum depth of four feet and a minimum volume:


- Equal to the maximum daily flow over a 24 hour period from all fixtures connected to the grease interceptor, or
- 1,000 gallons, whichever is greater

Grease trap interceptors must meet the following specifications:

- Constructed using watertight durable material or concrete
- Accessible for convenient inspection and maintenance
- Designed to accommodate traffic loading if installed in areas of traffic
- Equipped with clean out covers over the inlet and outlet of the unit
- Fitted with cleanout ports with manhole extensions
- Constructed with inlet and outlet piping as follows:
  - Minimum diameter of 4 inches
  - Be comprised of a tee-pipe fittings that extend within 12 inches of the bottom and at least 5 inches above the liquid level of the tank
- Constructed on a level and stable base
- Constructed with outlet piping directly connected to a sanitary sewer

Additionally, no fixture or drain other than those listed above may be connected to the grease interceptor unless approved by an authorized agent.

Please note that other more detailed requirements such as concrete construction specifications and public health code requirements apply. Review the General Permit for details prior to designing and installing a grease interceptor.

 FUSS & O'NEILL

## • Results – Compliance Assistance Tools

– *The most commonly requested materials to assist municipalities with enforcing the General Permit include*

- *Educational handouts*
- *Template letters for NOV*
- *Documentation of their authority as “authorized agents” to enforce the General Permit*
- *Documents of potential repercussions of non-compliance*

# Outreach Material

- CD
  - *Frequently Asked Questions*
  - *Fact Sheets*
  - *Poster*
  - *Inspection Logs*
  - *Disposal Logs*
  - *Cleaning Logs*
  - *BMP Checklists*
  - *Deminimus Discharge Checklists*
  - *Training Presentation*



# Outreach Material

## Fats, Oils, Grease (FOG) FREQUENTLY ASKED QUESTIONS



### What is FOG?

Fats, Oils, and Grease (FOG) are a byproduct of cooking, food and drink preparation, and meat preparation. FOG is generated from meat fats, shortening, butter, margarine, sauces, and dairy products. When these products are washed down the drain from cookware, utensils and other means, they can impact plumbing and sewer collection system.

### Why is FOG an issue for my business?

FOG present in wastewater can block plumbing and sewer lines. When FOG cools down, it congeals and hardens, and will build up on the inside of pipes and sewer lines. The build up of FOG will eventually block the line and potentially result in sewer overflows into businesses, nearby homes and local waterways, potentially causing a loss of business and severe public health impacts such as cholera, dysentery and hepatitis. Overflows impacting public health, wastewater, and storm drains may result in expensive cleanup costs as well as fines from regulatory agencies.

### Am I subject to the General Permit?

If you are a Class III or IV Food Preparation Establishment (FPE) and you discharge to a sanitary sewer, you are subject to the General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments (General Permit). Class III and IV FPEs include but are not limited to restaurants, hotel kitchens, hospital and school cafeterias, taverns and cafes, factory cafeterias, church kitchens, bakeries and special club kitchens.

### Must I comply with the General Permit?

All class III and IV FPEs who discharge to the sanitary sewer must comply with the General Permit. Failure to do so may result in daily fines and revocation of food services licenses.

### Is my business required to have a grease removal device?

Your municipality and the Department of Environmental Protection require installation of grease removal devices if you are a Class III or IV FPE and you discharge to a sanitary sewer.

### What is the difference between Automatic Grease Recovery Units and Interceptors?

An interceptor is a large tank partitioned to remove grease and food waste by trapping floating FOG and settling particulates at the bottom by gravity. An automatic grease recovery unit (AGRU) is a smaller unit, often stainless steel that uses mechanical means to skim floating FOG and gravity to settle solids. Usually interceptors are installed in the ground outside a food service facility, and AGRUs are installed indoors, often under a counter or in the floor.

### What will authorized agents be looking for?

The authorized agents will inspect FPEs for compliance with the General Permit. They will verify that the food and drink service establishment are implementing Best Management Practices for controlling FOG, and have installed compliant FOG removal devices

### Are there any fees involved?

The establishment owner is financially responsible for all charges including installation, maintenance, pumping, disposal and repair of treatment systems. The establishments are also responsible for any fines or clean up costs associated with overflows or stoppages.

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## • Frequently Asked Questions

- *What is FOG*
- *Why is FOG an issue for my business*
- *Am I subject to the General Permit*
- *Must I comply with the General Permit*
- *Is my business required to have a grease removal device*
- *What is the difference between Automatic Grease Recovery Units and Interceptors*
- *What will authorized agents be looking for*
- *Are there any fees involved*

# Outreach Material

- **FOG Fact Sheets**

- *Fact Sheet 1 – Compliance Schedule*
- *Fact Sheet 2 – Treatment Requirements: Outdoor In-Ground Grease Interceptors*
- *Fact Sheet 3 – Treatment Requirements: Automatic Grease Recovery Units*
- *Fact Sheet 4 – Other Approved Units, Diminimus Discharges, Effluent Limitations*
- *Fact Sheet 5 – Pollution Prevention, Best Management Practices*
- *Fact Sheet 6 – Reporting & Record Keeping Requirements, Recording & Reporting Violations*

## FOG Fact Sheet 3

### TREATMENT REQUIREMENTS – AUTOMATIC GREASE RECOVERY UNITS (AGRUs)



An AGRU must be installed immediately downstream of each fixture(s) listed below:

- Pot sinks
- Pre-rinse sinks
- Any sink into which fats, oils, or grease are likely to be introduced
- Soup kettles or similar devices
- Wok stations
- Floor drains or sinks into which kettles may be drained
- Automatic hood wash units
- Dishwashers without pre-rinse sinks
- Any other fixtures or drains that are likely to allow FOG to be discharged

Please note that food grinder or food pulpers should not discharge to AGRU. Additionally, wastewater flows connected to the grease interceptor must be screened to prevent solids from entering the treatment unit.

An AGRU must meet the following requirements:

- Designed and installed in accordance with the manufacturer's specifications
- Sized to properly pre-treat the measured or calculated flows for all connected fixtures or drains
- Constructed using corrosion-resistant material such as stainless steel or plastic
- Equipped with an internal or external strainer mechanism to intercept and separate solids from the effluent flow
- Include a skimming device, automatic draw-off, or other mechanical means to automatically remove separated fats and oils. Such skimming device must be:
  - Hard wired or cord & plug connected electrically and controlled using a timer or level control
  - Field adjustable
- Fitted with an internal or external flow control device
- Located so as to permit easy access for maintenance

No fixture or drain other than those listed above must be connected to the AGRU unless approved by an authorized agent. Additionally, the AGRU must be operated no less than once per day.

Please note that other more detailed requirements such as unit installation and public health code requirements apply. Review the General Permit for details prior to designing and installing an AGRU.

# Outreach Material

- Posters


- To be posted near sinks or in Kitchen areas at FPEs
- Used for municipality events and advertisement

- Logs

- Cleaning Log
- Disposal Log
- Inspection Log



**STOP THE FOG CLOG**  
{FATS ♦ OILS ♦ GREASE}



FOG significantly impacts sewer systems as it builds up in the walls of pipes to the extent that a sewer stoppage or overflow can occur, leading to costly fines and clean-ups, and public health concerns, restaurant closure or revocation of food service licenses.

**Who Is Affected?**

**Your Business:**

- Attracts insects and other pests resulting in odor problems and public health hazards
  - Expensive plumbing repairs and property damage
  - Health code violations or closures
- Potentially serious and expensive non-compliance fines

**The Environment:**

- FOG buildup can impact drinking water resources
- Sewage overflows can impact fisheries and marine life

**The Municipality:**

- Costly maintenance and potential fines
- Costs could lead to increased sewer fees

poster created by @sewerworks



**FOG**  
{FATS ♦ OILS ♦ GREASE}

**Best Management Practices**

Fats, Oils, and Grease (FOG) is a byproduct of cooking, food and drink preparation, and meat preparation. When washed down the drain it can impact plumbing and sewer collection systems.

**Best Management Practices for keeping FOG out of the sewers:**

- Avoid bypassing treatment equipment that is used to remove FOG from wastewater
- Do not dispose of renderable FOG in grease interceptors or Automatic Grease Recovery Units (AGRUs), sanitary sewers, dumpsters or storm sewers
- Perform quarterly inspections
- Follow clean-out and documentation requirements
- Use an approved contractor to properly clean and maintain treatment units
- Maintain all AGRUs in accordance with manufacturers' recommendations
- Hire a FOG recycler
- Do not use hot water, steam, chemicals, or biological additives to release FOG from treatment units
- Do not discharge food grinders or food pulpers to treatment units
- Screen all wastewater flows connected to your treatment unit

**from sinks...**



**...to sewers**

**Tips to help reduce FOG at your facility**

- Train employees on BMPs and grease handling, storage, and disposal requirements
- Implement the use of "dry" clean up methods such as scraping or sweeping
- Ensure your grease interceptor is being cleaned on a regular basis
- When cleaning exhaust hoods, filters, floor mats, floors, and grills, ensure wash water does not discharge to the sewer without treatment
- Ensure all sink drains have screens to stop solids from entering the treatment units

**STOP THE FOG CLOG**  
{FATS ♦ OILS ♦ GREASE}



**FOG Resources:**  
For more information refer to the Department of Environmental Protection FOG Website - [http://www.ct.gov/dep/cwp/view.asp?v=27214q:3256964depNav\\_GID=1643](http://www.ct.gov/dep/cwp/view.asp?v=27214q:3256964depNav_GID=1643)

poster created by @sewerworks



# Outreach Material

- **Best Management Practices Checklists**
  - *To be used by FPEs to ensure they are following the BMPs outlined in the General Permit*
- **Diminimus Discharge Checklist**
  - *To be used by the municipality to determine an FPEs need for a treatment unit*
- **Resource Document For the Management of FOG Associated with FPEs**
  - *All the information covered today is explained in greater detail using this document*

**Diminimus Discharge Checklist**

Name of Inspector \_\_\_\_\_ Inspection Date \_\_\_\_\_

Signature Authorized Agent \_\_\_\_\_ Name of Facility \_\_\_\_\_

In accordance with Section 5(b)(4) of the General Permit, the authorized agent may grant a waiver of the treatment requirements outlined in Sections 5(b)(1) through 5(b)(3) if, in the judgment of the authorized agent, there is limited potential for FOG in the discharge.

Check "Yes" or "No" as appropriate to describe the conditions at the facility. If you answer "yes" to any of the questions below, the facility may be subject to Sections 5(b)(1) through 5(b)(3) (the treatment guidelines) of the General Permit.

Requirements	Yes	No	Description
• Does the facility have any of the following units that discharge to the sanitary sewer based upon the discretion and ultimate authority of the authorized agent? o If yes, include the number of units in the description.			
Pot sinks			
Pre-rinse sinks			
Any sink into which fats, oils and grease are likely to be introduced			
Soup kettles of similar devices			
Wok stations			
Automatic hood wash units			
Floor drains or sinks into which kettles may be drained			
Dishwashers without pre-rinse sinks			
Other fixtures or drains that are likely to allow fats, oils and grease to be discharged			
• Is there a potential for the presence of fats, oils and grease discharge based on the menu or kitchen stores (i.e., fried foods, cooked meat, dairy products)? o If yes, explain. (obtain a copy of the menu)			
• Is there a potential for fats, oils and grease discharge based on the frequency of operations? (i.e., 1-3 meals per day or snacks only) o If yes, describe operating hours in the space provided and explain.			
• Is there a potential for significant fats, oils, and grease discharge based on the volume of flow to the sanitary sewer? o Describe the volume of flow over a 24 hour period of time and explain.			
• Have pH or oil and grease samples been collected from the wastewater discharge that exceed permit limits? o If yes, report concentrations.			

Additional Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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# New Haven



# Overview

- The General Permit regulates the discharge of wastewaters from Class III or Class IV food preparation establishments (FPE) that discharge to a sanitary sewer

Class III & Class IV

Factory Cafeteria

Bakery

Restaurants

Hotels

Hospital Kitchens

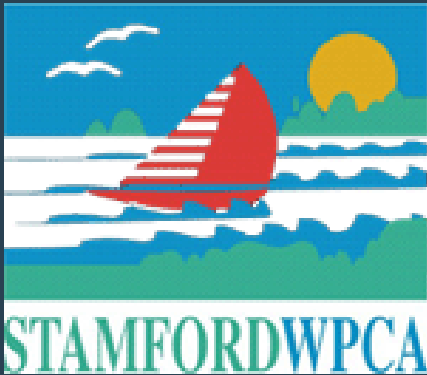
School Kitchens

Bars

Church Kitchens

Cafe

# Overview



- General Permit does not require that FPEs register with the DEP
- FPE will work directly with an authorized agent of the municipality in which the FPE is located
- Authorized Agents can include
  - *Water Pollution Control Authority (WPCA)*
  - *A designee from the WPCA such as*
    - *Building officials*
    - *Health Department workers*
    - *Public Works Department member*
    - *Company contracted to oversee the FOG program*

# Review

- Any new FPE initiating a discharge after September 30, 2005 will comply immediately
- Any FPE discharging prior to September 30, 2005 will comply no later than July 1, 2011

JULY 2011						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
					1	2
3	4	5	6	7	8	
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

June 2011

S	M	T	W	Th	F	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

August 2011

S	M	T	W	Th	F	Sa
1	2	3	4	5	6	
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

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# Review

- Where to go from here
  - *Review Guidance and Resource Documents*
  - *Review CD for useful documents*
  - *Create a Town Ordinance*
    - *Tax Incentives*

RESOURCE DOCUMENTS  
FOR THE DISCHARGE OF  
WASTEWATER ASSOCIATED WITH  
FOOD PREPARATION ESTABLISHMENTS

July 2006

Prepared By:

*Wright-Pierce*  
700 Plaza Middlesex  
Middletown, Connecticut 06457  
*Hadlyme Environmental Engineers*  
39 Bone Mill Road  
East Haddam, Connecticut 06423-1409

SEWERS  
Chapter 170

SEWERS  
ARTICLE I  
Sewer Use Charges

§ 170-1. Purpose.  
§ 170-2. Application of user charge system.  
§ 170-3. Definitions.  
§ 170-4. Classes of users.  
§ 170-5. Development of user charges.  
§ 170-6. Sewer user charge formula.  
§ 170-7. Tax Collector designated as collector of sewer use charges.  
§ 170-8. Administrator of Water Pollution Control Authority.  
§ 170-9. Payment of charges; collection; appeals.

ARTICLE II  
Sewer Use

§ 170-10. Purpose and applicability; enforcement official.  
§ 170-11. Definitions.  
§ 170-12. Use of public sewers required.  
§ 170-13. Sewer connection, permits and fees, construction requirements.  
§ 170-14. Discharge limitations, prohibitions and permits.  
§ 170-15. Protection from damage.  
§ 170-16. Power and authority of inspectors.  
§ 170-17. Penalties for offenses.  
§ 170-18. Appeals.

ARTICLE III  
Fats, Oils and Grease Pretreatment

§ 170-19. Purpose.  
§ 170-20. Definitions.  
§ 170-21. FOG Pretreatment System Installation Application.  
§ 170-22. Discharge Limits.  
§ 170-23. Pretreatment Equipment.  
§ 170-24. Alternate FOG Pretreatment System.  
§ 170-25. Pretreatment Equipment Maintenance.  
§ 170-26. FOG Minimization.

17001



# Questions

