FOG PRETREATMENT INFORMATION

New London Public Utilities
F.O.G. Program
120 Broad Street
New London, CT 06320

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Introduction

This information package includes instructions for meeting the requirements of the City of New London's Fats, Oils and Grease Pretreatment Program.

Regulations

The Connecticut Department of Environmental Protection's (CTDEP) General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments (DEP-WA TERP&S-GP-001) and the City of New London's, Sewer Use Ordinance govern the discharge of wastewater fi-om Food Service Establishments to municipal treatment systems. This ordinance requires the installation of FOG pretreatment equipment to minimize the discharge of fat, oil and grease to wastewater disposal systems. Veolia Water the contract operator and manager of the New London Public Utilities has been charged with the responsibility of overseeing the pretreatment program for the sewer connections located within the Service Areas of New London.

Regulated Food Service Establishments

Class I thru Class IV Food Service Establishments are businesses that cook food with grills, stoves, ovens, fryers or other cooking equipment. They prepare foods by cooking processes that,in most cases, result in the generation of fats, oils, and grease, a portion of which will be discharged with wastewater to the disposal system. These establishments must pretreat wastewater generated in the kitchen as outlined here and as required by local ordinances and the State regulation listed above.

The Purpose of the FOG Pretreatment Program

The FOG Pretreatment Program was implemented to reduce the volume of animal fat, cooking oils, and frying grease discarded in wastewater. Grease discharged to municipal wastewater collection systems may accumulate at any location within the collection system. Over time, this accumulation can decrease the capacity of the sewer lines or entirely block the sewer lines, causing untreated sewage to overflow the sewer system, contaminating the surrounding soil and possibly entering businesses, and homes. Sewage overflowing the collection system can pose a threat to human health and the environment. The clean-up of sewage, the removal of the grease blockage, as well as replacement of damaged prope1ty costs the rate payers of the New London Utility System hundreds of thousands of dollars each year. The CT DEP has the general permit (DEP-WATERP&S-GP-001) to address this problem.

FOG Management Requirements

The FOG Pretreatment Program is required for all Class I thru Class IV Food Service Establishments. If your business cooks food with grills, stoves, ovens, fryers or other cooking equipment than you are required to implement a FOG Management Plan. The FOG plan will consist of two elements-FOG minimization procedures and FOG wastewater pretreatment.

- FOG Minimization procedures include grease-handling practices that reduce the volume of grease coming in contact with wastewater. All Food Preparation Establishments are encouraged to develop a FOG Minimization Plan. The FOG Minimization Plan needs to consider the items listed below.
    - o Training programs for new and existing employees on proper FOG management procedures.
    - o Posting of signs by sinks not protected by grease pretreatment equipment, clearly stating permitted activities in all applicable languages. For example:

FOODPREPONLY
NO CLEANING OF POTS, PANS, DISHES,
OR UTENSILS AT THIS SINK.

    - o Dry scraping of pots, pans, dishes, and utensils prior to rinsing at the pre- rinse sink or placing in a dishwasher so that residual food is disposed of with the trash rather than with wastewater.
    - o Emptying of all exhaust-hood drip pans and waste grease from grills into a renderable grease collection container.
    - o All facilities that utilize a deep fryer must use the services of a renderer for disposal of waste frying oil.
    - o Food Service Establishment managers are encouraged to review their operations periodically and update FOG minimization procedures and confirm that employees are implementing proper grease handling techniques.

- FOG Wastewater Pretreatment Requirements
  There are two methods of pretreating wastewater to remove FOG from water flowing from Food Service Establishments.

    1) A passive outdoor grease trap that is buried in the ground and separates the FOG from the waste stream. These need to be cleaned on a regular basis to remove the accumulated FOG.

    2) Automatic Indoor Grease Recovery Units (AGRU) or an **Approved** Super Capacity Grease Interceptor that are installed in the kitchen area and treat wastewater from the sinks where FOG is washed down. These sinks typically include the pot sinks, pre-rinse sinks, sinks where FOG is likely to be introduced, soup kettles and wok drains, dishwasher pre-rinse stations and hoodwash down areas. The Automatic Grease Recovery Units typically require daily operation and maintenance. The Super Capacity units are required to be completely cleaned out quarterly by an Authorized Vendor and the cleaning invoices are to be kept on file.

  For operation and maintenance of passive outdoor grease traps and automatic indoor grease recovery units, the procedure for meeting the State of CT General Permit and the City of New London's Sewer Use Ordinance include the following items.

- Registration with the New London Public Utility authorized agent Veolia Water
- Installation of passive outdoor grease traps, automatic indoor grease recovery units, or Approved Super Capacity units were not currently installed
- Routine pumping of the entire contents of the outdoor grease traps, or daily maintenance of automatic indoor grease recovery units or as recommended by the manufacturer
- Documentation and reporting of all FOG pretreatment equipment operation and maintenance activities.

Details for complying with these requirements are given below:

Registration with New London Public Utilities

The registration process includes completing the registration form included in this information package and attaching the following plans and details.

Design and Installation Requirements for Outdoor Grease Traps

The specific design requirements are given in the CT **DEP-** WATER P and S-GP-001. Installation of an outdoor grease trap requires a licensed septic tank installer. A licensed plumber is required to make the connection from the outdoor grease trap to the municipal sewer. Licensed septic tank installers and plumbers will be familiar with the details of grease trap installation to meet the ordinance referenced above. In general, the requirements for outdoor grease traps are:

- Outdoor grease traps shall have a retention time of at least twenty-four hours at the maximum daily flow from the establishment, based on water meter records or other calculation method as approved by the Authority or a minimum capacity of at least 1,000 gallons, whichever is greater.
- Outdoor grease traps shall have a minimum liquid depth of 36 inches.
- Outdoor grease traps must meet all local setback restrictions for property lines, wells, and water lines.
- Outdoor grease traps must be installed on a separate building sewer servicing only kitchen flows and shall only be connected to those fixtures listed under section "Kitchen Fixtures Required to be connected to Pretreatment Equipment."

Design and Installation of Automatic Indoor Grease Recovery Units

Automatic indoor grease recovery units should be installed and operated in those locations where the size of the lot the facility is located on is insufficient to meet the installation requirements (setback restrictions) for outdoor units. Approval for automatic indoor grease recovery units may also be granted for existing facilities where kitchen and sanitary wastes are combined. New facilities, those constructed after September 30, 2005, must maintain separate sewers for kitchen and sanitary wastewater. Automatic grease recovery units may be of the timer activated or sensor activated types. The requirements for either of these types of automatic grease recovery units are as follows:

- Automatic grease recovery units must have integral heater and solids screening basket
- Automatic grease recovery units must use an external FOG collection container
- Automatic grease recovery units must receive flow only from those fixtures listed below under section "Kitchen Fixtures Required to be connected to Pretreatment Equipment." Some facilities may find that multiple treatment units are needed to meet this requirement.

Super Capacity Grease Interceptor

Super Capacity Grease Interceptor Units should be installed and operated in those locations where size of the lot the facility is located on is insufficient to meet the installation requirements (setback restrictions) for outdoor units. Approval for Super Capacity Grease Interceptor Units

may be granted for existing facilities where kitchen and sanitary wastes are combined. New facilities, those constructed after September 30, 2005, must maintain separate sewers for kitchen and sanitary wastewater. Super Capacity Grease Interceptor units will be Schier Great Basin units as these are the only one approved at this time. The requirements for this type of unit are:

1. Interceptor must be properly Sized
2. A complete cleanout of Interceptor must be completed every 90 days and must be performed by an authorized vendor and a Cleaning Invoice must be on File.
3. A strainer must be installed on any sinks/equipment that is tied into the Interceptor. This is to prevent solids from entering.
4. There must be a minimum of 12 inches of clearance between the top of the Interceptor and any equipment so that the unit may be cleaned properly.

Kitchen Fixtures required to be connected to Pretreatment Equipment

The kitchen equipment and fixtures that are to be connected to FOG pretreatment equipment are given below.

- Pot sinks;
- Pre-rinse sinks or dishwasher without pre-rinse sinks;
- Any sink into which fats, oils, or grease may be introduced;
- Tilt kettles or similar devices;
- Floor drains or sinks into which kettles may be drained;
- Wok station drains;
- Automatic hood-wash units;
- Dishwashers without pre-rinse sinks; and
- Any other fixtures or drains that can allow fats, oils, and grease to be discharged into the sewer.

Restroom facilities must not discharge to FOG pretreatment equipment.

Routine Cleaning of FOG Pretreatment Systems

All grease traps must be cleaned regularly to ensure proper operation. The frequency of cleaning will vary depending on the type of grease trap installed (indoor or outdoor) the size of the unit installed, and the volume of grease discharged to the unit. Cooking operations located in rented facilities should ensure that adequate access to the grease trap is available for maintenance of the unit or coordinate access with the facility owner.

Outdoor Grease Trap Maintenance

All outdoor grease traps must be cleaned by a Grease Trap/Interceptor Cleaner once every three (3) Months or when the grease and settled solids layer in the trap reaches 25 percent of the liquid depth of the trap. (25 percent of a standard grease trap having a liquid depth of3 6 inches is nine (9) Inches of grease and settled solids.) To be properly cleaned, the entire contents of an outdoor grease trap, including the grease and scum layer, the liquid, and the settled solids, must be removed.

Less frequent cleaning of grease traps may be approved if a low rate of FOG accumulation can be demonstrated to the satisfaction of the inspectors and management.

Automatic Indoor Grease Recovery Unit Maintenance

All automatic indoor grease recovery units must be cleaned once each day the facility is in operation, or once per operation cycle of the grease recovery unit, whichever is more frequent. Proper cleaning of an automatic indoor grease recovery unit requires the contents of the grease collection container to be emptied into a proper disposal receptacle. The screening basket must be cleaned, and the inlet and outlet grease discharge ports must be checked to ensure they are

clear. Automatic grease recovery units must be in full working order and energized at all times when not being serviced. All grease recovery unit maintenance activities must be recorded on a clearly identified maintenance log.

Documentation of All FOG Pretreatment Equipment Maintenance Activities

Food Service Establishments must maintain an on-site equipment maintenance log. An entrymust be made in this log each time the equipment is inspected or cleaned (see attached examples). Each unit must have a dedicated maintenance log. Maintenance logs are to be clearlymarked with labels such as "Outdoor Grease Trap Log- Front Parking Lot" or "Indoor Grease Trap- Pre-rinse Station" to identify the pretreatment unit for which information is being recorded.

Inspections of FOG Pretreatment Equipment

Inspections of grease pretreatment equipment will be conducted by Veolia as the authorized agent for the New London Public Utilities. The Food Service Establishment is responsible for finishing the tools and labor necessary to open grease traps for Veolia inspection personnel. These inspections may include:

- Review of maintenance log documentation
- Review of receipts from Grease Trap/Interceptor Cleaners
- Review of FOG minimization plan
- Inspection of the pretreatment equipment.

Violations noted during inspections are divided into categories as shown below.

- Installation violations are deficiencies in equipment such as not having a FOG pretreatment system, automatic grease recovery unit not hard wired to electrical system, missing or broken system components, or similar equipment related violations.
- Operational violations include failure to properly maintain pretreatment equipment and failure to comply with the FOG minimization plan. All violations must be corrected within the time shown in the following table.

Violation Days from Inspection to Correct Violation
• Equipment not Registered 30 days
• Installation Violations (Outdoor and Indoor) 90 days
• Operational Violations 30 days

Repeated failure to comply with the FOG Pretreatment Program may result in enforcement action by the New London Public Utilities, or the Connecticut Department of Environmental Protection and the Ledge Light Health District. New London Public Utilities has the ability to terminate water service to a business that is not complying.

SECTION K: QUESTIONS/COMMENTS

Should you have questions or comments concerning the application forms, please direct your questions/ comments to:

New London Public Utilities
F.O.G. Program
120 Broad Street
New London, CT 06320

Derek Palmerone-Program Coordinator
Phone: 860-405-6475
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New London Public Utilities
FOG MINIMIZATION PLAN GUIDANCE

Adherence to FOG Minimization procedures is critical to maintaining a good FOG pretreatment program. In addition to ensuring compliance with Connecticut's *General Permit for the Discharge of Wastewater Associated with Food Preparation Establishments*, FOG minimization procedures are good for the environment, and can reduce water usage, minimize operations cost and avoid maintenance.

Minimization procedures include those house-keeping items that each employee must do as a matter of routine to reduce FOG in the wastewater. Every facility should review their kitchen procedures to determine if additional measures are needed at their facility. Typical minimization procedures include the following items:

1. Perform dry clean-up: Renderable FOG generated during cooking should be poured into a renderable FOG collection container. A pot scraper or paper should be used to scrape uneaten food from pots, skillets, and plates into the trash prior to rinsing. This material can collect in drain lines and lead to slow draining of sinks, backup of wastewater into the kitchen.

2. Remove garbage grinders: The *General Permit* does not allow the use of garbage grinders. Remove garbage grinders to ensure that food scraps do not clog AGRU inlet screens or accumulate in grease interceptors.

3. Place screens over all drain lines: In prep sinks and pot sinks, even after scraping most of the residual food into the trash, small bits of food will still be washed into the sink. Screens should be placed over all drains. Screens provide an easy way to prevent clogged drains.

4. Place signs at all sinks: Signs are to be placed above all sinks stating what activities are permitted at that sink. In some facilities (those with AGRUs) not all kitchen drains will be protected with FOG pretreatment equipment. Placing signs above all sinks is a reminder to employees that FOG minimization procedures need to be followed.

5. Place used grease in the correct container: Grease used in cooking and obtained during the cooking process can be rendered if it does not come in contact with wastewater. This material should be placed in a separate container for renderable FOG. Many facilities place a small container by the stove for using during cooking. This material should be transferred to a larger container at the end of each shift. This material should never be poured down the drain.

6. Use the services of a rendering company: Service contracts can be set up with rendering companies to periodically remove waste FOG from a facility. This material can be used to make animal feed, cosmetics, biodiesel fuel, lubricants and many other products. Renderers typically provide containers for outdoor storage.

7. Use the services of a Grease Trap Interceptor Cleaner: Contracts can be set up for Grease Trap Interceptor Cleaners to service FOG interceptors on a prearranged schedule. This type of arrangement is the best method to ensure that outdoor FOG interceptors are maintained on a regular basis.

8. Properly store waste FOG: When stored improperly, used FOG can attract rodents, flies, and stray animals and produce unpleasant odors. When space is available, containers for renderable oil should be placed in a refrigerated space. This eliminates many nuisance conditions. When space is not available in a refrigerated space, the renderable oil container is typically placed outside. The container should be clearly marked as a renderable FOG container. The container must have a secure lid to prevent rain from entering the container. This lid must remain closed when material is not being added. The area around the container should be level and away from storm drains. Renderable FOG should not be placed in the trash. Trash collection trucks are not designed for large volumes of liquids.

9. Maintain a hot water temperature between 125°F and 150°F: The Public Health Code requires that hot water used in Food Preparation Establishments be maintained between 125°F and 150°F for sanitation purposes and to prevent scalding. This is also the optimum temperature range for FOG pretreatment.

10. Clean AGRUs daily: AGRU or Automatic Grease Recovery Units are generally designed to operate once or twice each day the Food Preparation Establishment is in operation. These units should be cleaned daily by pouring FOG from the collection container into a designated non-renderable FOG container. When the designated nonrenderable FOG container is full, a Grease Trap/Interceptor Cleaner that specializes in disposal of AGRU grease should remove the grease. **It** is often easiest to remove the grease from the AGRU collection container soon after the AGRU has operated so that the material is liquid and pours easily. AGRUs have solids screening baskets that must be cleaned each day. Material from the solids screening basket should be placed in the trash. Each cleaning of the AGRU must be recorded in the AGRU operation and maintenance logbook.

11. Maintain areas around FOG interceptors and AGRUs open for easy access; FOG Interceptors are typically located below grade either behind the kitchen or in the parking lot. Dumpsters, rendering containers, or other material that could prevent access should not be located over the outdoor FOG interceptor. AGRUs must be cleaned daily. To facilitate cleaning, an open area around and immediately above the unit must be maintained. Products such as detergents, pot Scrapers, and other material should be stored in a different area.

12. Routine training for all kitchen staff: Kitchen staff should be reminded from time to time of FOG best management practices as well as other sanitation procedures and kitchen policies, to ensure that all employees follow the same practices.

13. Reduce the volume of cooking oil used and reuse cooking oil when possible: reducing and reusingcooking oil reduces the volume of oil that must be purchased and is a good business practice in addition to reducing waste.

14. Clean exhaust hood filters in the pot sink or employ a service; some areas of the state have companies that provide cleaning services for exhaust hood filters. **In** areas where these services are not available, exhaust hood filters should be cleaned in pot sinks that discharge to FOG Pretreatment Equipment. In no case should these filters be cleaned outside. Cleaning of these filters outside may allow the FOG to enter local rivers and streams via a storm drain.

15. Other: The procedures and equipment at kitchens are as varied as the menus they offer. Food Preparation Establishment managers are encouraged to review their operations and determine what methods apply to their kitchen. FOG Minimization Plans should be signed and dated by the person responsible for kitchen activities. Facilities that have dedicated maintenance staff responsible for cleaning AGRUs or scheduling grease interceptor cleaning should discuss FOG Minimization techniques and coordinate their efforts with the kitchen staff.

FOG AUTOMATIC/ SUPER CAPACITY GREASE TRAP MAINTENANCE LOG

Mail to: New London Public Utilities
F.O.G. Program
120 Broad Street
New London, CT 06320
Derek Palmerone - Program Coordinator Phone 860-405-6475
derek.palmerone@veolia.com

Facility Name and Address._____Date_____

Contact Name and Phone_____

This grease trap is to be cleaned once each day. Grease removed from the unit is to be stored in the non-renderable grease container located._____

The grease container is serviced by Phone#

DATEffIME	INITIALS	EMPTY BASKET	CLEAN TROUGH	WIPER BLADES	GREASE VOLUME	DISPOSAL
1						
2						
3						
4						
5						
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71						
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