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Introductory: Green N Clean's FOG Program

Fats, Oils & Grease (FOG) is a major problem today in operating a municipal sewage system. FOG obstructs floats and reduces the life of pumps leading to Sanitary Sewer Overflow's (SSO) and a need for frequent service. Obstruction of grease is the most prevalent cause of force main backups and sewage overflows, costing the industry billions of dollars annually. FOG makes up approximately 80% of deposits found in lines and grease traps and require extensive physical cleaning to avoid blockages, odors, and the passage of grease in effluents to be re-deposited downstream.



Green N Clean's mission and commitment is to control, if not eliminate, the high levels of certain harmful parameters, which largely contribute to modern day pollutions of our earth, water, and air.

Green N Clean's NO FOG program begins the process of proactively educating and making the consumer aware of the major issues facing our underground environment. The following pages provides you with a brief overview of **Green N Clean** creating a turnkey **NO FOG** program in your city or region.

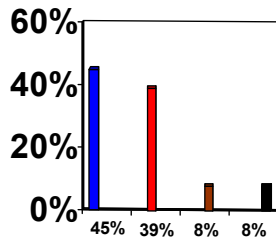
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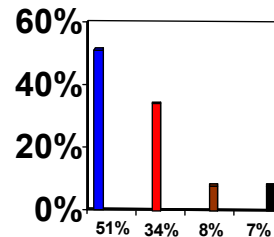
Key Objectives of a FOG Program

- Eliminate/Reduce the clogging of sanitary sewer pipelines and the overflow of pollutants into our waterways today
- Minimize amount of FOG entering sewer system
- Promote a “Regional” approach that is:
 - ✓ Cost-effective – based on cause & effect analysis
 - ✓ Equitable to all customers
 - ✓ Provides level playing field and has consistent requirements
 - ✓ Phased-in: 1) Food Service Establishments 2) Residential

Mainline Stoppages



Sanitary Sewer Overflows



Key Elements of FOG Program: Food Services

- Awareness and Education to commercial customers
 - ⇒ Targeting food service establishments (FSE's), i.e. restaurants
- City Bylaws or regulatory requirements for FSE's
- Potential **Green N Clean** No FOG bioremediation program at all FSE's



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FOG Strategy & Next Steps: Food Services

- **Meet with FSE's and assess current process**
 - ⇒ Corporate head office: fast food chains
 - ⇒ Regional and independent restaurants
- **Develop educational materials and training based on FSE assessments**
- **Present necessary & appropriate regulatory measures, i.e. city bylaws**

Education & Marketing Materials

Identify, implement and distribute effective education marketing materials FSE's

- ⇒ City FOG Program (*example*): next page
- ⇒ **Green N Clean** FOG Program (*example*) : following page
- **Distribution of materials by Environmental Health and/or Public Works**
 - ⇒ Posters, Magnets, Stickers
 - ⇒ Fact Sheets
 - ⇒ Email Newsletters
 - ⇒ Website Links
 - ⇒ Press Releases and Advertisements
- **Distribution of materials by other stakeholders**
 - ⇒ FRLA: Florida Restaurant Lodging Association
 - ⇒ Corporate real estate companies
 - ⇒ Food safety training
 - ⇒ FOG related companies: **Green N Clean**
- **Site visit of problem areas/facilities**
 - ⇒ County/City inspection
 - ⇒ FOG related companies: **Green N Clean**



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**Fats
Oils
Grease**



Restaurants Need To Do

ECO City 24-hour Sewage Spills Call 123

As a restaurant owner or employee, you have many responsibilities – one of them is to maintain an unclogged sewer system. Eco City Sewers Bylaw, Municipal Code, Chapter 000, requires all commercial, industrial and institutional food facilities to dispose of fats, oils, and grease properly and install and maintain a proper grease trap on appropriate plumbing fixtures.

To ensure that your grease trap and the cities sewer system is not FOG Clogged in order to maintain a clean environment, underground and surrounding waterways, the following are important “DOS AND DON'TS OF PROPER FOG MANAGEMENT”.

DOS

- Train all staff in proper waste management
- Start a grease trap cleaning log
- Prevent solid foods such as leftovers and coffee grounds from entering the drain
- Place a strainer on all sink drains
- Remove all solid grease build-ups from processing equipment
- Collect excess grill and frying grease and put it into the waste bin for recycling
- Clean up grease spills using an absorbent material (e.g. cat litter) and place in dry garbage bin
- Connect any fixture or drain that discharges wastewater containing FOG to the grease trap

DON'TS

- Do not use detergents, toxic solvents, enzymes that claim to dissolve grease. These products move grease down the line and cause problems further down the pipe. Only use eco-friendly products that the city has tested and approved.
- Do not use hot water or other methods that would facilitate the passage of FOG through the grease trap.
- Do not discharge garbage that has been through a grinder down a drain, it may cause your waste levels to be high and violate the Sewers Bylaw.
- Do not connect the following to the grease trap: food processors, toilets, urinals and hand sinks.

ECO CITY SEWER BYLAW, MUNICIPAL CODE, CHAPTER 000: REQUIREMENTS AND INFORMATION FOR RESTAURANTS

1) Install and maintain a grease trap

2) Limits – see below:

Parameter	Limit (mg/L)	Prevention
Oil and Grease (animal & vegetable)	150	Maintain the grease trap
Biochemical Oxygen Demand (BOD)	300	Prevent solids from entering the drain
Total Suspended Solids (TSS)	350	Prevent solids from entering the drain

3) Effluent from garbage grinders must comply with the municipal code 000

4) Conviction can result in a fine of up to \$50,000 for first offence and \$100,000 for subsequent offences.



NO FOG Program

Benefits

Digests & Converts FOG into CO2

Reduces TSS, BOD & H2S Levels

Controls Noxious Odors

No Enzymes

100% Eco-Friendly – NO Toxins

Safe and Easy to Use

Reduces Maintenance & Man-Hour Costs

Eliminates/Reduces Vac Pump Trucks

Eliminates Restaurant Down-Time

Guaranteed Results: 18+ Yrs.

Helping to Clean Up Our Underground Environment and Waterways

Instructions



- Place PH Meter Stick into Grease Trap
- PH Level Less Than 6.0 add Baking Soda and Test Again
- Mix 1-4oz Packet with 5 Gallons of Water and Stir
- Spray on Pumps, Floats and Wall
- If Spray Not Available Pour into Grease Trap and Stir
- Heavy FOG Dose Daily until Cleared Up Then....
- Dose Weekly and After Closing Time

Data Entry

Weekly **Green N Clean** FOG Details

- Day/Time of Dosing
- PH Level Reading
- FOG Depth: Ft. / Inch
- Comments

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FOG Regulatory Measures

- Grease trap requirements for new, remodelled and re-current problem facilities
- County/City bylaw, ordinance implementation and process
- Inspection and 'call-to-action' reporting process
- Penalty assessment

Ordinance Requiring Microorganism FOG Pre-Treatment

Market: Long Hill, New Jersey

ORDINANCE #109-2002

AN ORDINANCE REQUIRING A MICROORGANISM PRETREATMENT PROGRAM FOR FOOD-HANDLING ESTABLISHMENTS AND SUPPLEMENTING AND AMENDING CHAPTER XXII OF THE TOWNSHIP CODE ENTITLED "SEWERS"

WHEREAS, Public Works Manager Gerald Testa and Waste Water Treatment Plant Operator Mario Bonaccorso have recommended that the Township adopt an ordinance requiring all food establishments to maintain their sewer works with the treatment of microorganisms; and

22-13.7 Treatment of Microorganisms. All restaurants, retail food establishments, catering establishments, commercial food preparation facilities, meat processing facilities and similar facilities shall maintain their sewage works with treatment of microorganisms. The microorganisms treatment shall be of a type approved by the sewer plant operator and shall be applied in accordance with the manufacturer's specifications.

Microorganisms which reads as follows:

22-13.7 Treatment of Microorganisms. All restaurants, retail food establishments, catering establishments, commercial food preparation facilities, meat processing facilities and similar facilities shall maintain their sewage works with treatment of microorganisms. The microorganism treatment shall be of a type approved by the sewer plant operator and shall be applied in accordance with the manufacturer's specifications.

Section 3. Any and all other ordinances or parts thereof in conflict or inconsistent with any of the terms hereof are hereby repealed to such extent as they are so in conflict or inconsistent.

Market: Paramus, New Jersey

C. Where installed, all grease, oil and sand interceptors shall be maintained by the owner at his expense in continuously efficient operation at all times.

D. Grease traps are required for all waste outlets from all grease-producing establishments. The type and manufacture of grease traps must be approved by the Plumbing Inspector and the Sewer Department before installation.

E. Each grease-producing establishment shall be required to control oil and grease discharges, as follows:

A bacterial pre-treatment program shall be developed and implemented by the user of the grease producing establishment so as to ensure that the grease-producing establishment's effluent will not exceed the grease and oil limitations as established in this Ordinance. The bacterial treatment program shall be subject to review and approval by the Sewer Department.

professional engineer licensed in the State of New Jersey. The data showing the sizing of the grease trap shall be submitted for approval of the Plumbing Inspector.

(4) A bacterial pretreatment program shall be developed and implemented by the user of the grease producing establishment so as to ensure that the grease-producing establishment's effluent will not exceed the grease and oil limitations as established in this Ordinance. The bacterial treatment program shall be subject to review and approval by the Sewer Department.

F. No new grease trap shall be installed adjacent to, or immediately downstream from, a hot water source.



Phase II FOG Program: Residential Communities



- Majority of all FOG issues come directly from residential communities, especially high density and low income family neighborhoods.
- Majority of all municipalities do not have a Household NO FOG Program to educate and increase the awareness of FOG issues, sewage overflows and increased taxpayer reactive costs.
- Majority of household residents pour fats, oils and grease down their sinks because they have no such device to properly collect and dispose of the FOG properly.

Green N Clean will work exclusively with each municipality to design and execute an educated and awareness NO FOG Residential program, including products that will stop residents from pouring FOG down the drains. Eco-Friendly Results!!



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NO FOG Program: Next Steps

Thank you for taking the time to read this brief outline of our **NO FOG** program. We welcome the opportunity to discuss our **NO FOG** program in more detail and design a turnkey marketing initiative that educates and increases the awareness of our underground environmental and economic issues today, including effective and stricter sewage bi-law compliances.

I can be reached any time via email @ paul@greennclean.com or 1-800-517-1928 ext. 2.
Until next time have a **Green N Clean** day!

Yours truly,

J. Paul A. Bolté
Green N Clean



Green N Clean Water Pollution Up. Reverse & Clean-up our Waterways....GNC 100% Eco-Products.

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