

# City of Newburyport



Fats, Oils and Grease



# Fats Oil and Grease (FOG) program that works.

Prepared by:

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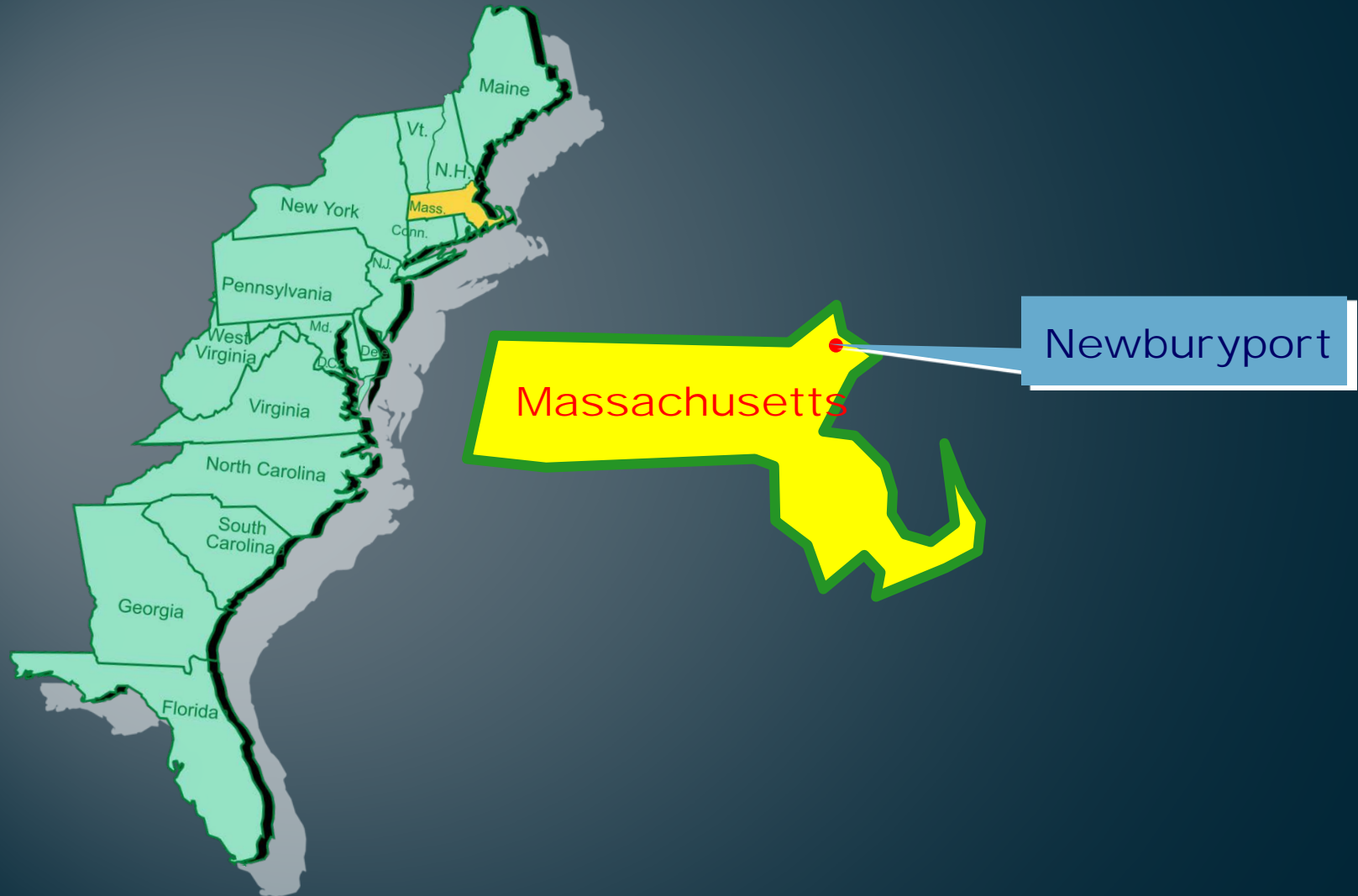
Jamie Tuccolo, Collection System Superintendent.

Frank Giacalone, Board of Health Director.

Patricia McAlarney, Board of Health.

Jerry Cronin, Pretreatment Coordinator/  
Environmental Inspector.

# Location



# Sewer System Components.

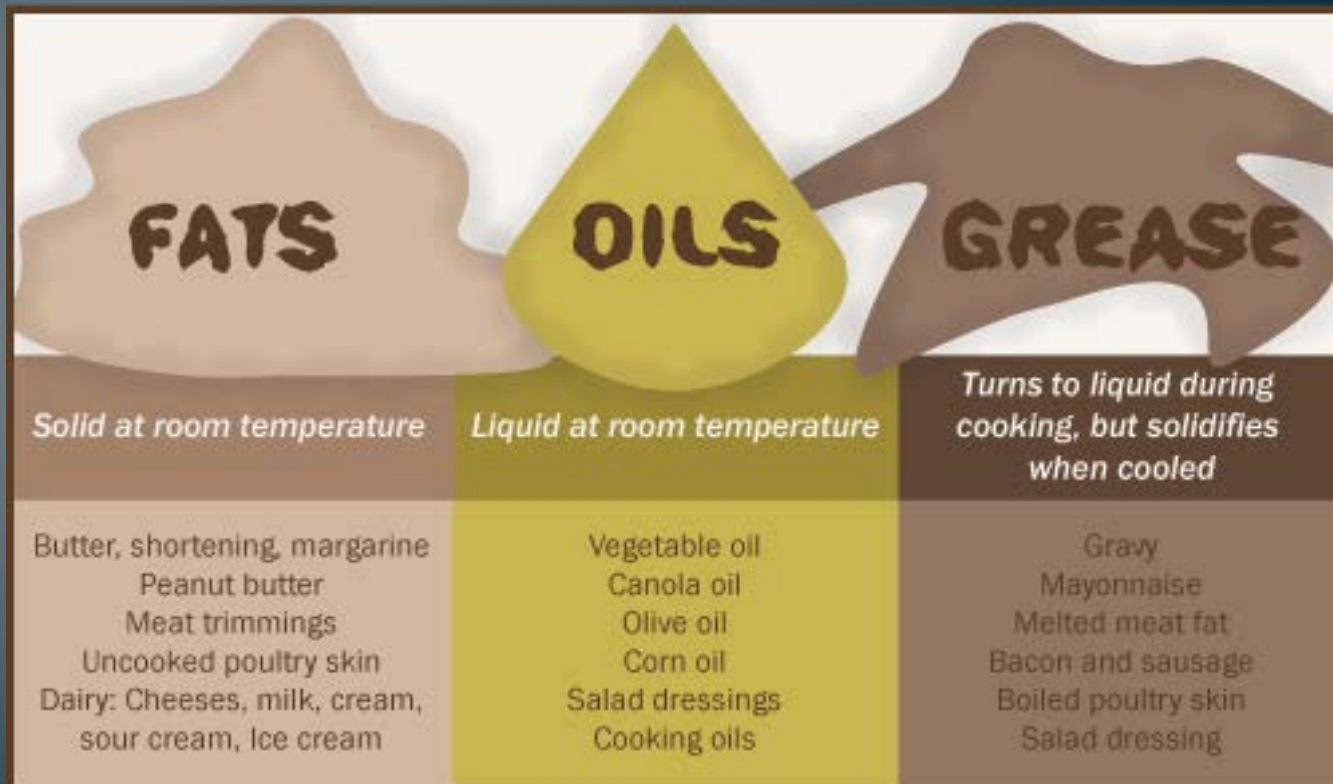
- Newburyport Sewer System Dates Back to the Late 1800's.  
Components of the system are:
- 1,580 Sewer Manholes
- 396,000 linear feet of sewer pipe
- 72,544 linear feet of vacuum sewer pipe
- 16 Lift Stations
- 18,407 Residential and Business Customers

# Recurring Problems:

- Odor complaints
- Floating material causing costly sewer back ups to the city and property owners
- Clogged pumps and City mains
- Sanitary Sewer Overflows (SSO)



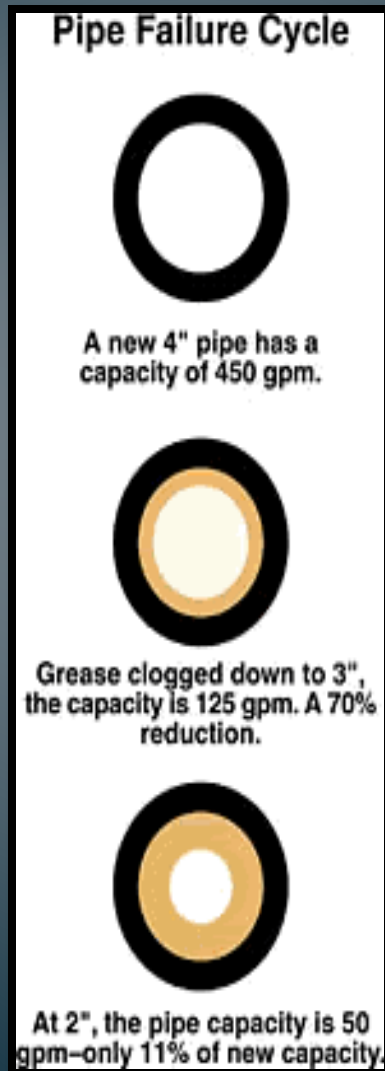
# Where does FOG come from?



The infographic is divided into three vertical columns, each with a colored header and a list of examples below. The first column is light brown and labeled 'FATS', the second is yellow and labeled 'OILS', and the third is dark brown and labeled 'GREASE'. Each column also has a descriptive subtitle in italics.

<b>FATS</b>	<b>OILS</b>	<b>GREASE</b>
<i>Solid at room temperature</i>	<i>Liquid at room temperature</i>	<i>Turns to liquid during cooking, but solidifies when cooled</i>
Butter, shortening, margarine Peanut butter Meat trimmings Uncooked poultry skin Dairy: Cheeses, milk, cream, sour cream, Ice cream	Vegetable oil Canola oil Olive oil Corn oil Salad dressings Cooking oils	Gravy Mayonnaise Melted meat fat Bacon and sausage Boiled poultry skin Salad dressing

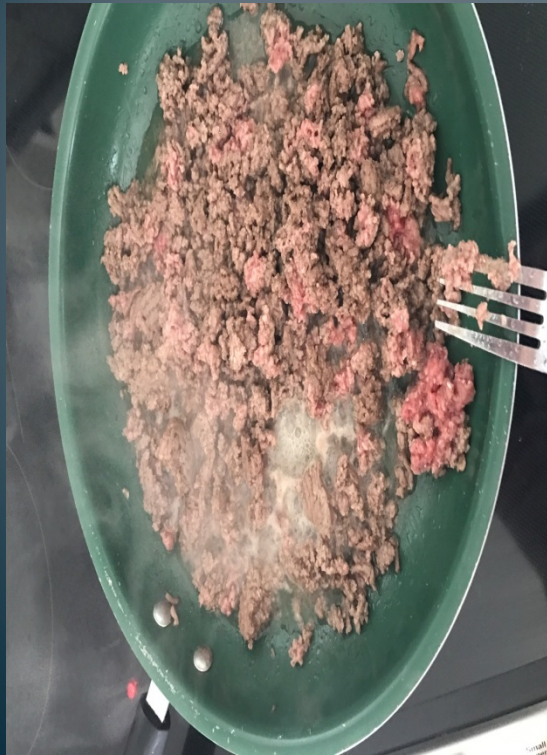
# Sewer pipe before and after grease build up causing sewer back ups.



Proper disposal of grease generated while cooking and cleaning will greatly reduce FOG related issues i.e.

sewer back up's, note the following steps:

1: Cook. 2: Drain liquid grease into can. 3: dry wipe with paper towel before washing.





Following the steps demonstrated in the previous slide  
will reduce FOG build up in pipes.  
When the steps are not followed below is an example of  
what can happen.



# Impacts of FOG to City Services

- Yearly operational cost as well as rate increases will continue to rise due to FOG impacts
- Service, operators handle one call at a time, grease is getting to the point of causing multiple calls at the same time at different locations
- FOG impacts operations at the WWTF, causing biological issues within the treatment process
- This is a City wide issue
- Moving (FOG) downstream instead of eliminating only creates multiple problems at different locations

Oleo Woods lift station wetwell left slide before  
cleaning , right slide after cleaning  
(all residential flow)





# Impact to Businesses & Residents

- Health Issues
- Repair Costs
- Clean up cost
- Loss of revenue to businesses
- Reputation (business owners)



# Statistics

In the United States, sewers back up annually “an estimated 400,000 times, and municipal sewer overflows on 40,000 occasions” (Whitman, 2000). The EPA has determined that sewer pipe blockages are the leading cause of sewer overflows, and grease is the primary cause of sewer blockages, see Figure #1 and Figure #2 (EPA 2004, p. 4-28).

Figure #1 - Causes of Sewer Overflows

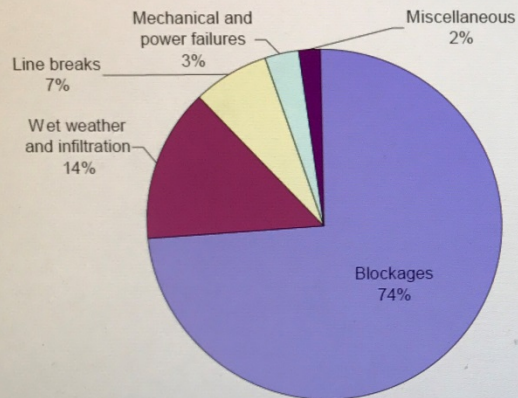
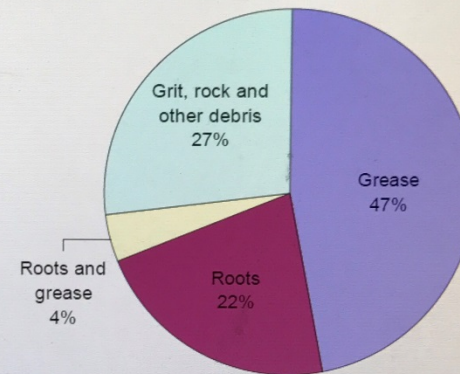


Figure #2 – Causes of Sewer Blockages



Source: EPA, 2004, p. 4-28

# FOG ORDINANCE

- The City's FOG ordinance allows 200 mg/l of discharge, even with that small amount the city constantly has grease related issues/backups.
- The following slides are a few examples of grease issues the City is currently facing:



# Bottom of State at Water Street 2016



# Bottom of State at Water 2017







**USMH: 65**

**DSMH: 66**

**Deposits Attached Grease**

**12.0 ft.**



# Liberty St 2016



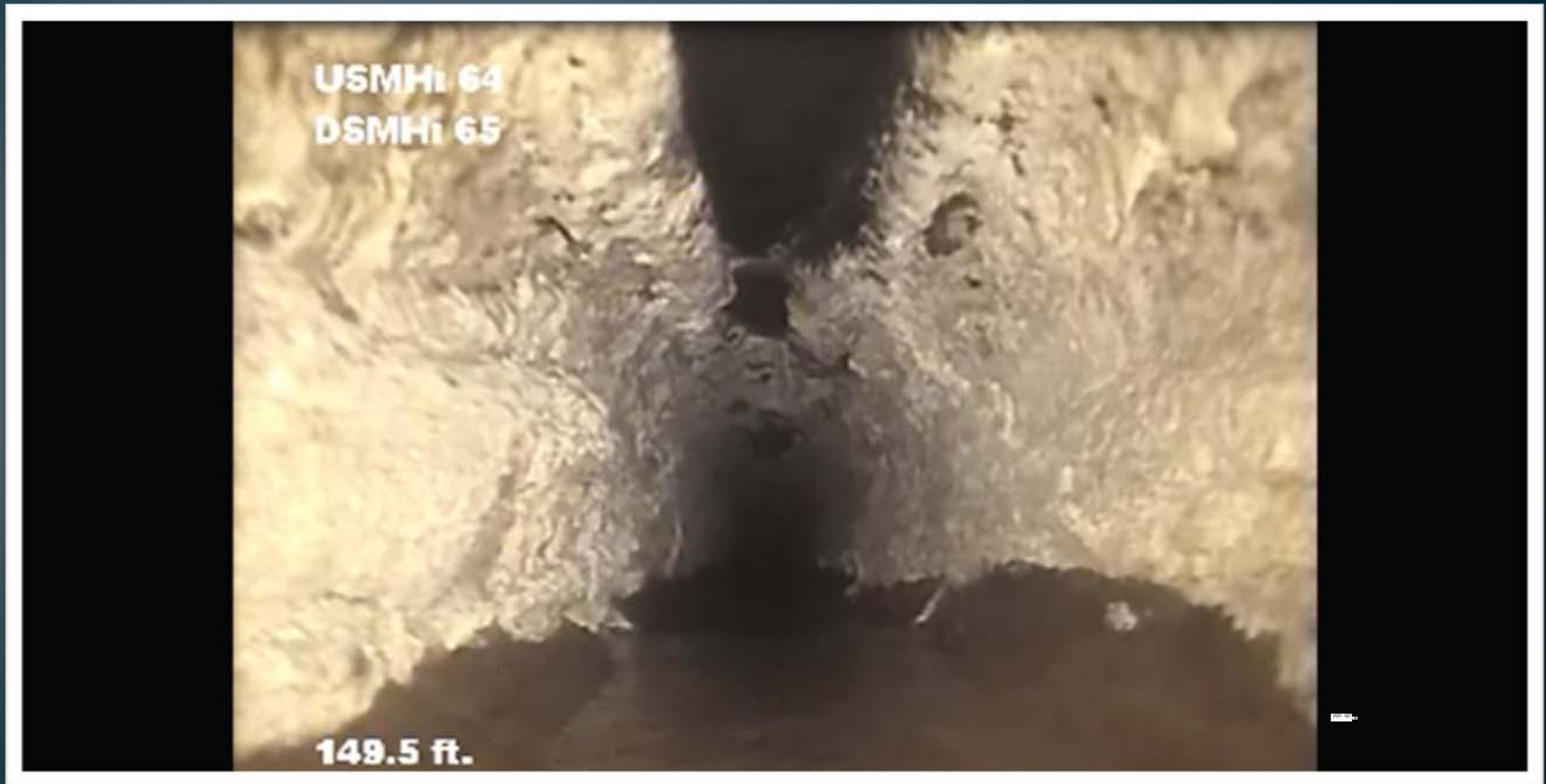


# Liberty at State 2017



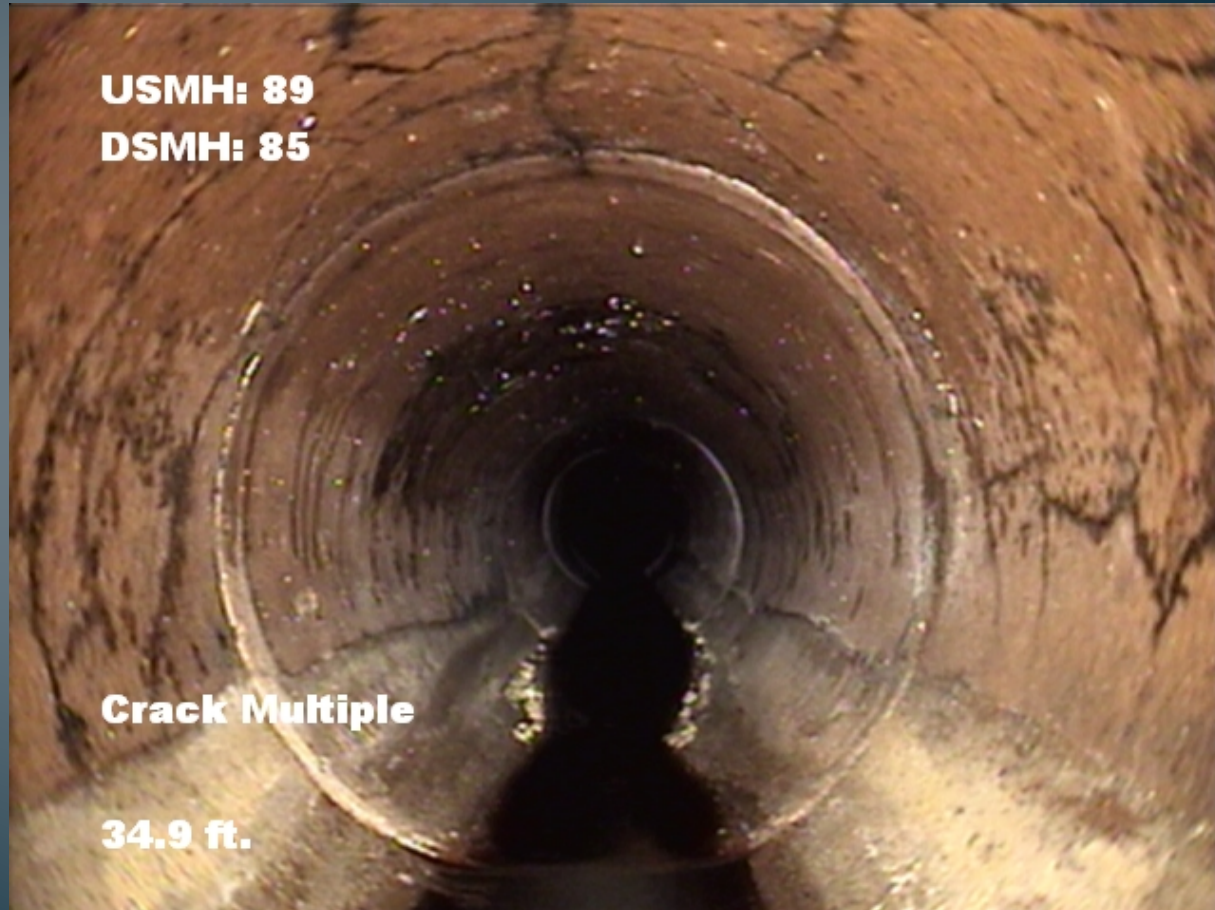
# State St between Middle and Liberty

## 2017





Sewer pipe without grease build up.  
Although the pipe looks large, the average pipe size  
including the below picture in Newburyport is only  
6"- 8".



## Invert without grease





## Grease Issue at Scotland Rd lift station





## Grease Issue at Graf Road Lift Station





# The Program:

# The FOG Program:

- Clean grease trap once per month.
- Approved/Permitted grease hauler through the BOH ONLY!
- Pumping Records on site for two years.
- Official variances from BOH only, the official variance letter must be available at all times in the FOG binder verbal will be accepted.
- Staff members on every shift including prep crew must have access and knowledge of location of the FOG binder. This is considered a violation if staff cannot produce records upon inspection/request.
- Train staff to ensure proper disposal of FOG.
- Accessibility for sampling inside and outside at all times.

# The FOG program:

- Grease haulers need to properly fill out paper work, sending yellow copy to BOH, leaving white copy in binder this is the haulers responsibility.
- The grease hauler will be in violation not business owner if proper paper work procedure is not followed.



# Enforcement:

- Health Department inspections two times per year, along with unannounced inspections.
- Sewer Department unannounced inspections.

## Violation process and fines for establishments:

- 1. FIRST OFFENSE -WARNING & EDUCATION
- 2. SECOND OFFENSE \$1000.00 & EDUCATION
- 3. THIRD OFFENSE \$5,000.00 & EDUCATION
- 4. FOURTH OFFENSE \$10,000 AND SUSPENSION OF PERMIT (Food Establishment)

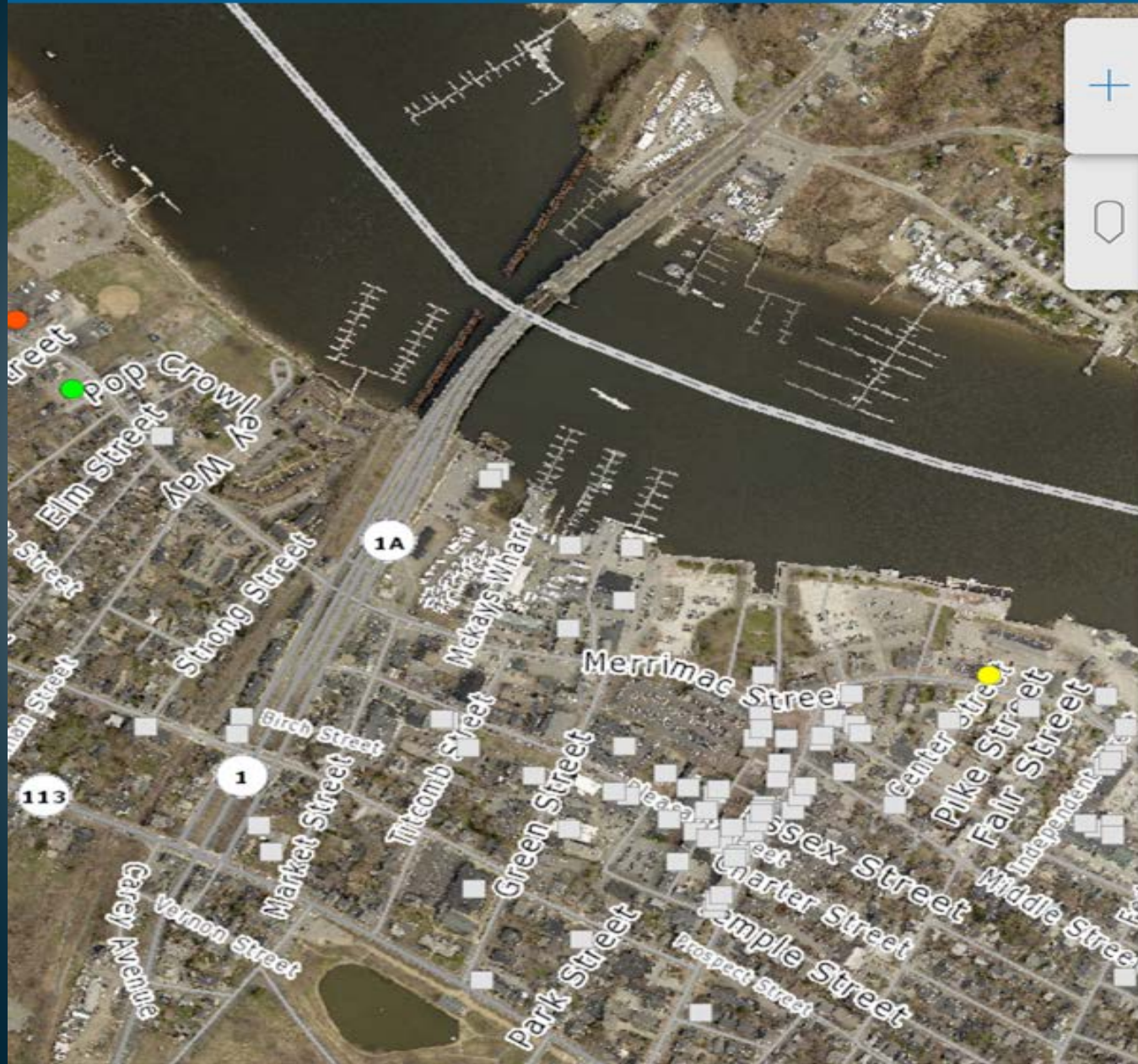
## Violation process for grease haulers:

- 1. FIRST OFFENCE- WARNING & EDUCATION
- 2. SECOND OFFENSE- , within the 24 month period of receiving a written warning, the hauler (company not the driver) will be brought for a administrative hearing before the Director of Public Health and or Board of Health and may be subject to fines, suspension or revoked permit

## FOG app:

- The FOG app was created to insure proper/accurate tracking and record keeping of all FOG related items per establishment.
- The app allows the sewer department and BOH the ability to monitor/submit inspection logs, report issues, etc. React and respond when needed.
- The next two slides are pictures of the new FOG app.

10:54 AM



## Collect a new feature



Filter



Business In Compliance

In Compliance



Business Not In Compliance

30 Day Notice Issued



Business Not In Compliance

Not In Compliance



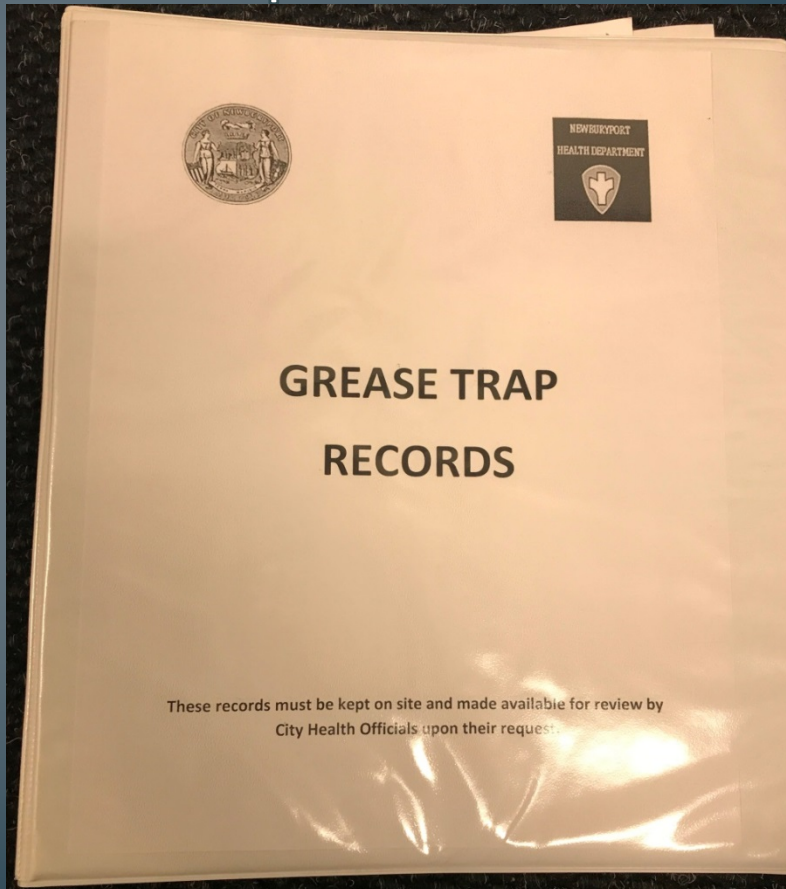
Business Not Inspected

Not Inspected





All establishments in Newburyport have or should have received the required FOG binder, the binder must be available for inspection upon request. If you do not have a binder please let us know at the end of this presentation.



Required Pumping Record Form to be fill out by hauler.  
White copy is to remain in the binder, yellow copy is to  
be returned to BOH within 14 days of cleaning .

System Pumping Record – Grease Traps			
Name of Facility: _____		Date of Pumping: _____	
Location: _____		Total # of Grease Traps at this location _____	
<hr/>			
<b>Trap # 1</b> Location of Trap _____ <input type="checkbox"/> Interior Trap <input type="checkbox"/> Exterior Trap Approx. Size of Trap _____ <i>(in gallons or dimensions)</i> Was trap emptied of all liquids, solids and FOG during cleaning? <input type="checkbox"/> YES <input type="checkbox"/> NO-only FOG removed Give estimate of what percent of trap content was FOG _____ % Trap Condition: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor Any Leaks Noted <input type="checkbox"/> Yes <input type="checkbox"/> No Should gasket or baffles be replaced? <input type="checkbox"/> Yes <input type="checkbox"/> No Rust <input type="checkbox"/> Lots <input type="checkbox"/> Some <input type="checkbox"/> None Notes: _____ _____	<b>Trap # 2</b> Location of Trap _____ <input type="checkbox"/> Interior Trap <input type="checkbox"/> Exterior Trap Approx. Size of Trap _____ <i>(in gallons or dimensions)</i> Was trap emptied of all liquids, solids and FOG during cleaning? <input type="checkbox"/> YES <input type="checkbox"/> NO-only FOG removed Give estimate of what percent of trap content was FOG _____ % Trap Condition: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor Any Leaks Noted <input type="checkbox"/> Yes <input type="checkbox"/> No Should gasket or baffles be replaced? <input type="checkbox"/> Yes <input type="checkbox"/> No Rust <input type="checkbox"/> Lots <input type="checkbox"/> Some <input type="checkbox"/> None Notes: _____ _____	<b>Trap # 3</b> Location of Trap _____ <input type="checkbox"/> Interior Trap <input type="checkbox"/> Exterior Trap Approx. Size of Trap _____ <i>(in gallons or dimensions)</i> Was trap emptied of all liquids, solids and FOG during cleaning? <input type="checkbox"/> YES <input type="checkbox"/> NO-only FOG removed Give estimate of what percent of trap content was FOG _____ % Trap Condition: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor Any Leaks Noted <input type="checkbox"/> Yes <input type="checkbox"/> No Should gasket or baffles be replaced? <input type="checkbox"/> Yes <input type="checkbox"/> No Rust <input type="checkbox"/> Lots <input type="checkbox"/> Some <input type="checkbox"/> None Notes: _____ _____	<b>Trap # 4</b> Location of Trap _____ <input type="checkbox"/> Interior Trap <input type="checkbox"/> Exterior Trap Approx. Size of Trap _____ <i>(in gallons or dimensions)</i> Was trap emptied of all liquids, solids and FOG during cleaning? <input type="checkbox"/> YES <input type="checkbox"/> NO-only FOG removed Give estimate of what percent of trap content was FOG _____ % Trap Condition: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor Any Leaks Noted <input type="checkbox"/> Yes <input type="checkbox"/> No Should gasket or baffles be replaced? <input type="checkbox"/> Yes <input type="checkbox"/> No Rust <input type="checkbox"/> Lots <input type="checkbox"/> Some <input type="checkbox"/> None Notes: _____ _____
Company/Location where contents will be disposed: _____			
System Pumped By: _____ <i>Name of Hauling Company</i>		Technician Name _____ <i>Technician License #</i>	
PUMPING RECORDS MUST BE SUBMITTED BY THE GREASE HAULER TO HEALTH DEPARTMENT WITHIN 14 DAYS OF PUMPING Newburyport Health Department ♦ 60 Pleasant Street, Newburyport MA 01950 ♦ 978-465-4410 (Fax: 978-465-9958)			



# Conclusion:

- Understanding and following the FOG program will make it succeed
- Education is key
- If you have questions please do not hesitate to contact the BOH or Sewer Department
- The City is working with you not against you

- Questions