

Captain Plunger to the Rescue

How New Bedford Transformed Their IPP and FOG Program Using Outreach and Technology



Shawn T. Syde, P.E.
Zeb Arruda

June 7, 2016

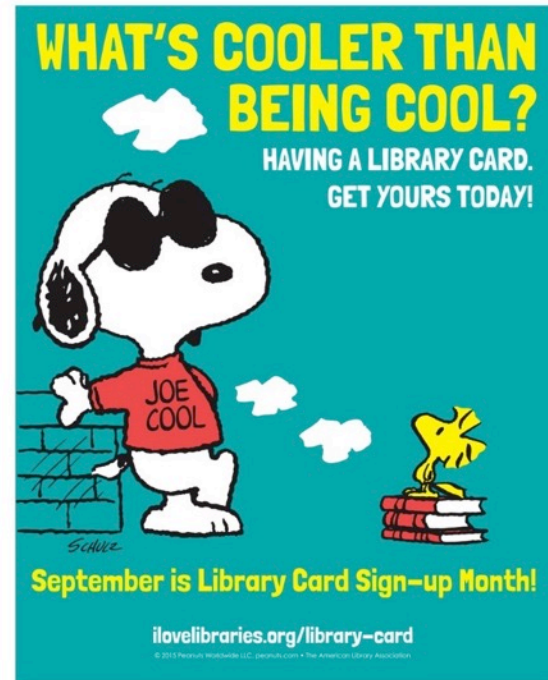
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Presentation Outline

- Family History
- The Birth of Captain Plunger
- Captain Plunger Saves the Day
- Captain Plunger Continues the Fight...



Close Relatives of Captain Plunger



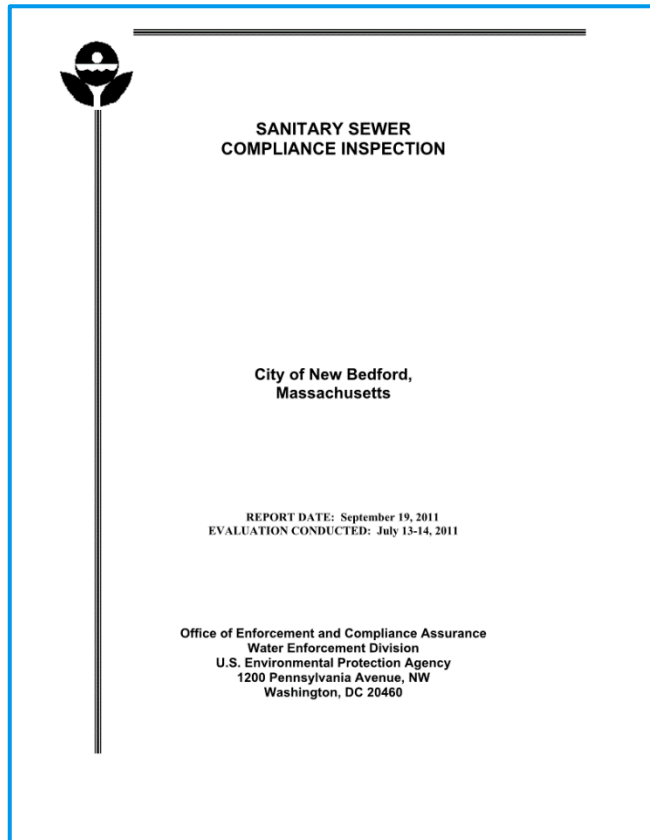
Close Relatives of Captain Plunger




Close Relatives of Captain Plunger



Background



Background

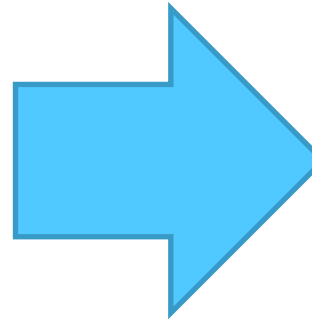


**SANITARY SEWER
COMPLIANCE INSPECTION**

**City of New Bedford,
Massachusetts**

REPORT DATE: September 19, 2011
EVALUATION CONDUCTED: July 13-14, 2011

**Office of Enforcement and Compliance Assurance
Water Enforcement Division
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460**



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I**

IN THE MATTER OF:)	DOCKET NO. 12-010
City of New Bedford)	FINDINGS OF VIOLATION
New Bedford, Massachusetts)	
NPDES Permit No. MA0100781)	AND
)	
Proceedings under Sections 308 and 309(a)(3) of the Clean Water Act, as amended, 33 U.S.C. §§ 1318 and 1319(a)(3))	ADMINISTRATIVE ORDER

I. STATUTORY AUTHORITY

The following FINDINGS are made and ORDER ("Order") issued pursuant to Sections 308(a) and 309(a)(3) of the Clean Water Act, as amended (the "Act"), 33 U.S.C. §§ 1318 and 1319(a)(3). Section 309(a)(3) of the Act grants to the Administrator of the U.S. Environmental Protection Agency ("EPA") the authority to issue orders requiring persons to comply with Sections 301, 302, 306, 307, 308, 318, and 405 of the Act and any permit condition or limitation implementing any of such sections in a National Pollutant Discharge Elimination System ("NPDES") permit issued under Section 402 of the Act, 33 U.S.C. § 1342. Section 308(a) of the Act, 33 U.S.C. § 1318(a), authorizes EPA to require the submission of any information required to carry out the objectives of the Act. These authorities have been delegated to the EPA, Region I Administrator, and in turn, to the Director of the EPA, Region I Office of Environmental Stewardship ("Director").

The Order herein is based on findings of violation of Section 301 of the Act, 33 U.S.C. § 1311, and the conditions of NPDES Permit No. MA0100781. Pursuant to Section 309(a)(5)(A) of the Act, 33 U.S.C. § 1319(a)(5)(A), the Order provides a schedule for compliance that the Director has determined to be reasonable.

II. DEFINITIONS

Unless otherwise defined herein, terms used in this Order shall have the meaning given to those terms in the Act, 33 U.S.C. §§ 1251 *et seq.*, the regulations promulgated thereunder, and any applicable NPDES permit. For the purposes of this Order, "NPDES Permit" means the City of New Bedford's NPDES Permit, No. MA0100781, and all amendments or modifications thereto and renewals thereof as are applicable and in effect at the time.

Updates to Existing CMOM Program

- AO led to development of updated and enhanced CMOM program from prior program developed in 1993
- Embracing CMOM program as an opportunity to create efficiencies and expand system knowledge
- Technology advancements and data collection
- Formation of formal IPP and FOG department
- Public Outreach



Highlights of IPP and FOG Programs

- Over 570 food handling facilities in the City
- 10 categorical and 19 industrial users in the City regulated under EPA's IPP program
- Two staff dedicated to program
- Annual reporting requirements
- FOG ordinance promulgated in October 2015



The Birth of a Superhero

- Embraced public outreach efforts as a mechanism to improve system operations
- Reaching out to community for input and involvement
- Utilizing both regional and local avenues for outreach and communications



The Birth of a Superhero (Cont.)

- Coordinated through City's IPP and FOG program
- Partnership with New Bedford Vocational High School graphic arts students and faculty
 - Super hero character
 - Information boards, handouts, and flyers
- Engineering and IPP/FOG Departments sponsor high school and college internships

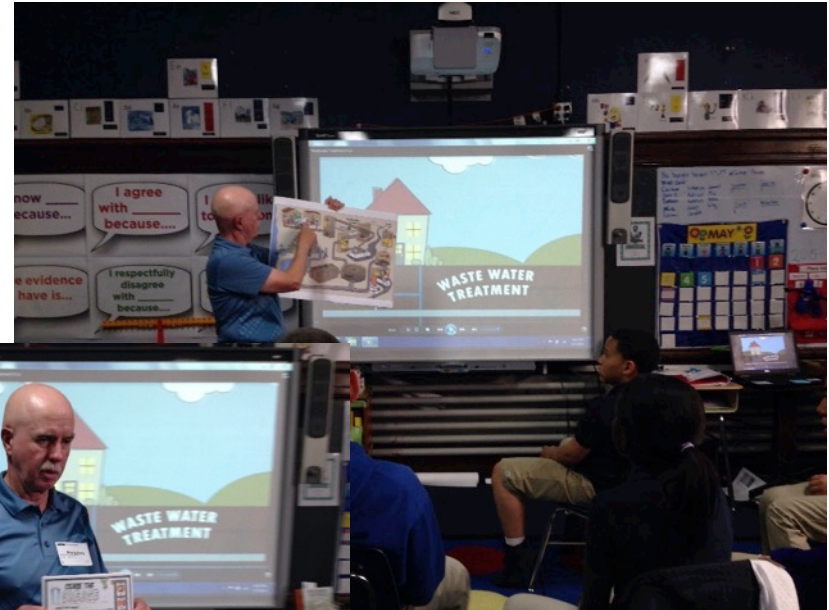


The Birth of a Superhero (Cont.)



Public Outreach and Education Starts at School

- Presentations to elementary school children
- Interactive demonstrations and engagement
- Simple but effective....



Internship Program Strengthens DPI Team



DON'T FLUSH THAT MONSTER TRASH

DOWN IN THE SEWER SWIMMING AROUND
THE CREATURE FROM THE BLACK WATER SEWER IS FOUND.
IT'S MADE UP OF BAND-AIDS, WRAPPERS AND MORE,
LEFTOVER MEDICINE AND DIRT FROM THE FLOOR.



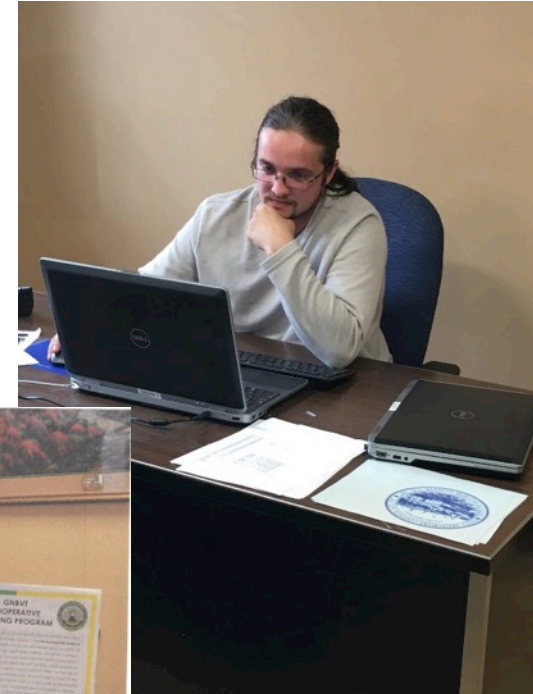
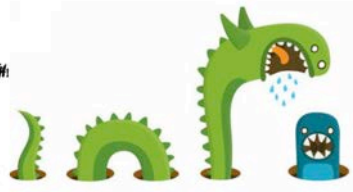
DON'T FLUSH YOUR TRASH!
DON'T FLUSH THAT MONSTER TRASH,
DON'T FLUSH YOUR TRASH!
DON'T LET US HEAR THE SPLASH,
DON'T FLUSH YOUR TRASH!
YOU'LL CATCH ON IN A FLASH.
DON'T FLUSH YOUR TRASH!
DON'T FLUSH THAT MONSTER TRASH!



FATS AND GREASE REALLY DO THE TRICK
TO KEEP THE TRASH TOGETHER AND MAKE IT REAL SUCK.
SO DON'T POUR BACON GREASE DOWN YOUR DRAIN.
THEN WE'LL NEVER SEE THAT CREATURE AGAIN!

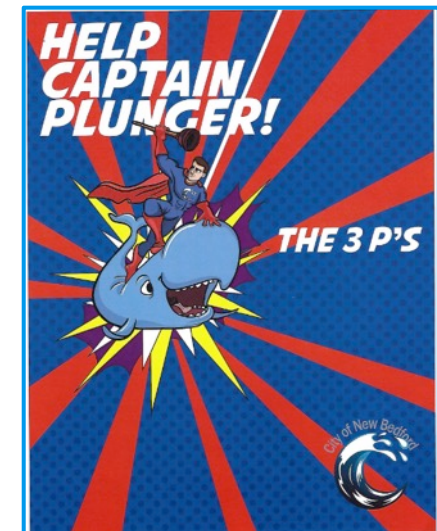


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DON'T LET US HEAR THE SPLASH,
DON'T FLUSH YOUR TRASH!
YOU'LL CATCH ON IN A FLASH.
DON'T FLUSH YOUR TRASH!
DON'T FLUSH THAT MONSTER TRASH!



Developing a Strong Brand

- Branding of Captain Plunger and DPI's FOG/IPP programs
- Cease the Grease Campaign
- Using Voc Tech visual design students to develop graphics, presentation material, and informational flyers
- Associates concept with goals



Cease The Grease Campaign



Cease The Grease Campaign (Cont.)



CEASE THE GREASE

WHERE DOES GREASE COME FROM? NEVER POUR OIL OR GREASE DOWN THE DRAIN

GREASE IS A BYPRODUCT OF COOKING THAT COMES FROM FOOD PRODUCTS. WHEN FLUSHED OR WASHED DOWN THE SINK, GREASE STICKS TO THE INSIDE OF DRAIN PIPES WHEN IT REACHES COOLER TEMPERATURES, AS IN THE BASEMENT OR OUTSIDE DRAINS. HOT WATER AND DETERGENTS THAT CLAIM TO BREAK UP GREASE ONLY MOVE IT A LITTLE FARTHER BEFORE IT CLINGS TO PIPES AGAIN. GARBAGE DISPOSALS DO THE SAME

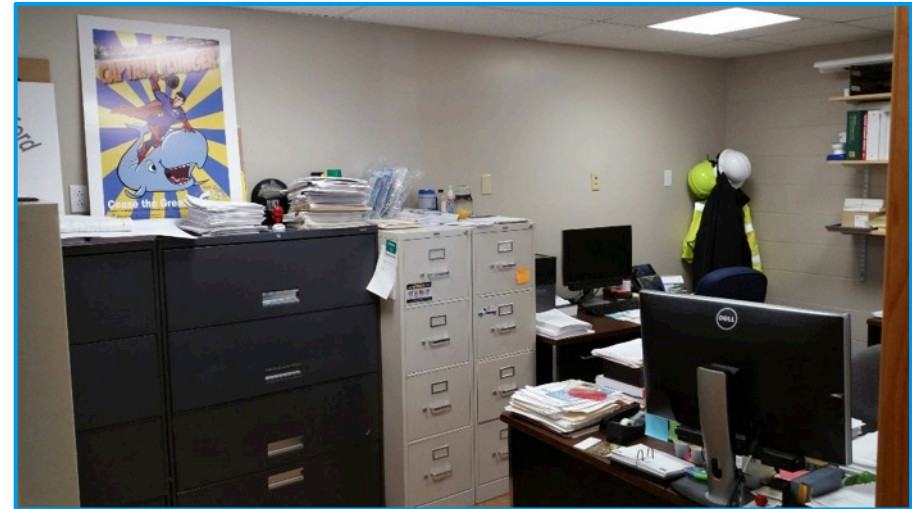
SCRAPE DISHES INTO THE GARBAGE BEFORE WASHING. WIPE DISHES WITH A DRY PAPER TOWEL TO REMOVE ANY REMAINING GREASE BEFORE WASHING. COVER SINK DRAINS WITH A STRAINER TO CATCH FOOD SCRAPS. MANY ITEMS ARE ADVERTISED AS "FLUSHABLE", BUT DO NOT BREAK APART- CAUSING A BLOCKED DRAIN. HOME OWNERS ARE RESPONSIBLE FOR THEIR PROPERTY'S SEWER PIPES- IMPROPER FLUSHING CAN COST YOU MONEY.

"YOU FLUSH IT YOU PAY FOR IT"



Paper, Paper, Everywhere!!

- Inefficiencies in data tracking and program operations
- Space constraints
- Expansion of the FOG program required a change in operations
- Manual labor and data entry to PreWin



IPP and FOG Programs in the 21st Century

- Technological improvements to drive efficiencies and system data collection, tracking, and management
- CMMS system enhancements
- Geographical Information System
 - Robust system updated to current ESRI standards
 - Record drawings and asset information
 - Restaurant and IPP locations in GIS
 - Linkage to CMMS system
- Inspections through CMMS system using iPads and custom applications
- New EPA regulations regarding electronic reporting (CROMERR)

CMOM in the 21st Century (Cont.)

CITY OF NEW BEDFORD DPI FOG PROGRAM INSPECTION FORM

Part 1 - FACILITY INFORMATION

Company Owner: _____
 Contact Person: _____
 FSE telephone number: _____
 Contact's cell number: _____
 Contact's e-mail: _____
 Type of Food Service: _____
 # of Grease Traps: _____
 Type of Grease Trap: **under sink** **in ground**
 Brand of Grease Trap: _____
 Size of Grease Trap: _____ gallons
 Hours of operation:

Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.

Seating Capacity: _____ persons
 Menu on file? **Yes** **No**
 Drive through window? **Yes** **No**
 Delivery Service? **Yes** **No**

Part 2 - GREASE TRAP MAINTENANCE

1) Changes made to unit since installation/last inspection? **Yes** **No**
 If Yes, detail changes: _____

2) Is the unit accessible? **Yes** **No**

3) Has the FSE implemented a training program to ensure that the BMPs are followed: **Yes** **No**

4) Does the FSE recycle the grease? **Yes** **No**

5) Does the FSE have records of grease removal? **Yes** **No** **N/A**
 Recycling Company: _____
 Address: _____

6) Are outdoor grease containers closed or covered? **Yes** **No** **N/A**
 7) Are there any storm drains near outdoor containers? **Yes** **No** **N/A**
 8) Does the FSE "dry wipe" utensils prior to washing? **Yes** **No**
 9) Is food waste disposed of in garbage/recycle bins? **Yes** **No**
 10) Are strainers for solid wastes in drains? **Yes** **No**
 11) Is grease trap cleaning documented on a log? **Yes** **No**
 12) Is a Cleaning/Inspection Log posted by each Trap? **Yes** **No**
 13) Is grease trap cleaned at least once per month?
 Frequency of cleaning: _____
 14) Grease trap does not contain >1/3 depth of grease. **Yes** **No**
 15) Grease trap does not contain >1/4 depth of sediment. **Yes** **No**
 16) The City has had blocked sanitary sewer lines traceable to FSE. **Yes** **No**

CMOM in the 21st Century (Cont.)

**CITY OF NEW BEDFORD DPI
FOG PROGRAM INSPECTION FORM**

Part 1 - FACILITY INFORMATION

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 Contact Person: _____
 FSE telephone number: _____
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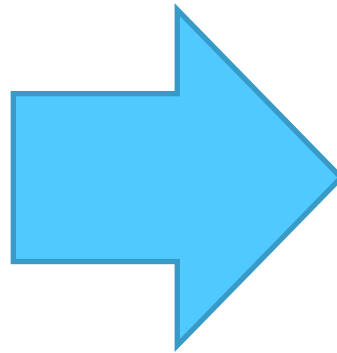
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FOG Facility - F-0555

Facility Number: F-0555 Facility Name: Wading City Youth Baseball League Prior Facility Occupant: _____
 Address: Street Name: Brookline Park Apartment/Suite: _____

City: New Bedford Annual Fee: _____ Received BMP:

Last Inspection Date: _____ Inspection Freq: _____ Hour: _____
 Next Inspection Date: _____ Inspection Freq Units: _____

Asian Corporate Cafeteria Italian Smoothies
 Bakery Day Care Mexican Southern
 Seafood Spanish Middle Eastern Sports Grill
 Burgers Fast Food Pizzeria Steakhouse
 Coffee/Donuts Grocery Sandwich/Soup Portuguese
 Commercial Cafeteria Hotel School Cafeteria
 Convenience Store Ice Cream Other

Comments: _____

Salutation: _____ Title: _____
 Billing Name: _____
 Billing Business: _____
 Billing Address 1: _____
 Billing Address 2: _____
 Billing Phone 1: _____
 Billing Phone 2: _____
 Billing E-mail: _____

Contact Name: _____
 Contact Address: Brookline St, New Bedford, Massachusetts, 02740
 Contact Phone: 508-995-9133 Bldg Code: 02745
 Contact Secondary Phone: _____
 Contact Fax Phone: _____
 Contact Email: _____
 On-Site Contact

General Comment: _____
 Seasonal: _____

Captain Plunger Continues the Fight

- Track system operations improvements in areas prone to grease and flushable issues through GIS and CMMS
- Track food handling facility and industrial user compliance
- Reduced operations costs and violations
- Education tool

The screenshot shows the 'Monitoring Points - 01' form. It includes fields for 'IPT Facility *' (SOS - Stone Crabsby Pool LLC), 'Monitoring Point *' (01), 'Date Issued', 'Treatment System', 'Wastewater Type', 'General Description' (Seafood Processing), 'Sampling Notes', 'Safety', 'Measure Device', 'Has Electricity', 'Default WQ Cal', and 'General Comment'. There is also a 'No WQ/PM/Req' checkbox.

The screenshot shows the 'Sewer IPT Monitoring Point Tests' form. It includes fields for 'Facility Number *', 'Monitoring Point *', 'Sample Type', 'Collection Method', 'Sample Name *', 'Group', 'Event', 'Due Date', 'Internal Comments', 'Comment', and 'Work Order Rec #'. It also features 'Inspector', 'Sample Taken *', 'Sample Taken Time', 'Entered Date', 'Lab Testing Date', 'Entered By', 'Facility Contact', 'Contact Phone', 'Testing Lab', and 'Test Results'. There are checkboxes for 'Has Violation', 'Late Event', 'COC Filled', and 'Latest Test'.

Questions

